

# MANUFACTURERS RECORD

A Weekly Newspaper Devoted to the Industrial, Financial, Railroad,  
Mining, Contracting, Engineering, Building, and General  
Business Interests of the South and Southwest

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No. 25

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## A Great Opportunity for the Steel Men of the Country

Rarely has there ever come to a great industry such an opportunity to show a broad spirit of patriotism, rising far above all individual interests, as that which now comes to the steel makers of America.

This country needs every ship that can be built. It is not possible for us to build enough steel ships, nor enough wooden ships; indeed, it will be difficult for us to meet the situation if we build both wooden and steel ships with all possible energy.

If the foremost steel men of the country would through some individual or joint statement give voice to this situation and urge that the country should build wooden ships as well as steel ships, and build as many of them as possible, great good would result. In taking a position such as this the steel men would show that they were not in the slightest controlled by selfish interests in their effort to provide steel for as many ships as can be built of steel, but that recognizing the need of wooden ships as well as of steel, they were actively and aggressively urging upon the country the importance of building wooden as well as steel ships.

The situation offers to the steel men of the United States a wonderful opportunity to win public favor by showing that this industry is not in any way dominated by selfishness. The iron and steel people of the country have been doing many things to show their full appreciation of their responsibility to the nation in this time of war; but here is a way in which they could rise immediately above all questions of personal interest and forever remove from the minds of the people of this country any thought of selfishness by coming out strongly and squarely for the building of wooden ships.

BALTIMORE, JUNE 21, 1917

# Bethlehem Steel Company

General Office—South Bethlehem, Pennsylvania

Announces the purchase of the property and plants of the AMERICAN IRON AND STEEL MANUFACTURING CO., located at LEBANON AND READING, PA., which with the BOLT AND NUT DEPARTMENT at STEELTON gives a complete range of sizes and variety of bolts and nuts.

We solicit your inquiries and assure prompt attention to your orders, and ask you to communicate with our nearest BRANCH OFFICE.

We are prepared to furnish:

## BOLTS

Machine, Carriage, Lag, Plow, Patch and Track.

## NUTS

Hot Pressed, Cold Punched, Forged, Finished, Case Hardened and Castle.

## RIVETS

Boiler, Bridge, Structural, Ship, Tank and Tap.

## SPIKES

Standard R. R., Screw Track, Universal Screw, Boat, Dock and Wharf.

## BAR IRON

Refined, Chain, Double Refined, Engine Bolt, Staybolt and Special Staybolt.

## HEAT TREATED TRACK

Frog and Fitting-up Bolts in SIMPLE ALLOY and MAYARI Steels.

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# MANUFACTURERS RECORD

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**Build Ships!**

**Build More Ships!**

**Build Still More Ships!**

**And keep on building them, wooden and steel alike and build as though our very life depended upon this, for it surely does!**

**Build Ships!**

## HELP THE STARVING.

INDICATIVE of the awful sufferings in Europe and of the wail of the dying for help, which Americans must heed, is a circular issued by an organization known as the Children of America's Army of Relief of 142 Berkeley street, Boston, Mass.

Some of the facts which have been furnished by that organization to the MANUFACTURERS RECORD, though not new, emphasize the horrors of starvation to such an extent that we wonder sometimes whether the people of this country will ever be sufficiently thankful every hour of their lives that thus far Providence has saved them from such agony.

In one of these circulars the following statements appear as indicative of the need of help, and help from all, however little or however much:

"In war countries millions of little children are without one mouthful of food—hundreds of thousands are in rags, and naked.

"Many live in holes in the ground, like wild beasts; children gnaw at the carcasses of dead animals to live; and in the fields by the roadside little ones, separated from parents, lie starving, dying—alone.

"Millions of children have starved to death. Weakened, exhausted, by two years of underfeeding and exposure, millions more will die if we do not help them!

"Ten cents will give a starving child one day's life.

"Three dollars one month's life.

"Thirty-five dollars one year's life.

"Won't you give at least one day's life to a little child?

"In God's Name, Help Now—No Matter How Little—They Are Dying!"

## INASMUCH.

WE have been privileged within the last few days to read a large number of private letters which have come from different parts of the battlefields of France to American friends. Most of them were written by ministers and missionaries. The story of destruction and of suffering which they tell fully confirms all that we have been hearing in this country about the ravages of the German army, about the utter ruin which has been left in their wake, and the sufferings of the people. No one can read these letters and the reports which come from Belgium, from Armenia and elsewhere without having his soul so burdened with pity and sympathy as to make him feel that no sacrifice which can be made by American people will be great enough to alleviate the horrors of the situation and save the millions of women and children and aged men, who, in rags, are literally dying of starvation.

No one can look upon the pictures which are sent from these scenes of sadness without being stirred to the deepest emotion of his nature. But emotions will not help. Sympathy is good in its place, but sympathy which does not reach deep enough to affect the pocketbook is valueless. Indeed, the sympathy which does not go deep enough to literally compel one to lessen personal expenditures or family expenses to sacrifice till it is felt, in order to save that he may give, will count for naught.

We are being called upon as no people on the face of the earth ever were to give not only out of our abundance, but to give out of sacrifice and close pinching of our own expenses in order that we may save the dying ere it is too late. We have lived so long in our accustomed way, far from the scenes of war, that we have grown somewhat callous as to the calls which come for help. We have looked to other people to carry on the work of the Red Cross and to furnish the money with which to feed the starving people of Belgium and Serbia and Armenia and of the overrun sections of France which have been redeemed from the curse and pollution of Germany's army. Our hearts have been somewhat touched as we have heard of the suffering of the French and Belgians, of the Christians in Armenia, of the dying women and children in Serbia, and of the agony of those who without food or shelter stretch out their bony hands and ask us to help, but how much has anyone of us done to help save the perishing?

If we do not give, and give as no nation on earth ever gave, we shall deserve, as no other nation ever deserved, except it be Germany, the punishment of the Almighty.

If we fail to hear the cry of the starving and the dying women and children, if we fail to sacrifice in order that we may save and give, we shall be utterly unworthy as individuals and as a nation even to have the privilege of thanking God for his blessings to us, and asking that he continue to bless our nation. These poor and helpless ones are just as much our neighbors as though they lived next door. We can hear the cry of the starving baby, and of the mother in her agony who can find no food with which to nourish it. It is the cry of the helpless; the cry of humanity to live; the cry of the starving for bread—even a crust, and yet we go on living our accustomed lives, sacrificing little or nothing in order that we may help others. We are wasting where we should be saving, and by closer economy and self-sacrifice we could give enough to save millions. But our hearts have not yet been deeply touched. Our emotions have been

moved, but we have not felt down in our soul the meaning of this appalling woe and sorrow that rests upon Europe.

Shall we come to their rescue, and while fighting the battle of civilization seek to save the women and children and the older men who cannot be used on the battlefield, from actual starvation?

The situation is beyond our power to fully comprehend. It baffles all human description. It offers an appeal to humanity such as the world never before knew. Shall we measure up to it, or shall we in this supreme hour of all civilization utterly fail to realize the magnitude of our responsibility and the call for sacrifice that we may save and serve?

Let no one for a moment think that this call does not come directly to him or to her. However great may be our own difficulties, however much we may have done in the past, or however great the strain of the high cost of living, there are few in the land who cannot at least contribute some little to help save a life. It is said that ten cents will keep one child in Europe in food for a day, and that \$35 a year will represent the saving of one child for a full year. How many millions and millions of ten cents a day might be saved by our own people! And every ten cents thus saved and expended in this cause would mean one more day for one more life.

"Verily I say unto you, Inasmuch as ye have done it unto one of the least of these my brethren, ye have done it unto me."

## SIX DAYS FROM BIRDS' NESTING PLACES TO THE SHIPYARDS.

OUR timber is entirely long-leaf and we will start off with a cut of 200,000 feet per day, but with a capacity of 300,000 feet.

"For the present the birds are still 'nesting in the trees,' but from the time the saw hits the tree until the big timber is at the ship's side, ready for work, will require only about six days, provided the ship is built on the Gulf coast—say Orange, Beaumont or Houston. We have about twenty years' supply of timber."

The foregoing extract from a letter from R. W. Wier of the Wier-Reynolds Lumber Co., Houston, Tex., is but another illustration of the South's ability to supply timber for shipbuilding purposes. And yet, though the future of the nation may depend upon ships of wood as well as ships of steel, many priceless hours are passing into days and weeks, and apparently likely to pass into months before the shipbuilding facilities of the country for wooden ships are fully utilized.

## MR. HOOVER CAN HELP BUTTER CONSUMERS.

FOOD COMMISSIONER HOOVER in his appeal to the public for the conservation of food urges the conservation especially of fats and the limitation of the use of butter. Will Mr. Hoover, in his effort to lessen the consumption of butter, co-operate with those who are trying to bring about a larger use of margarine by having the Government take off the tax which was put on it for the express purpose of protecting the butter interests as against margarine?

Here is a chance for Mr. Hoover to vastly increase the supply of fats for butter-making purposes. Will he do it?

## AN AMERICAN OR AN ENEMY—WHERE DO YOU STAND?

**A** DISPATCH from Tampa, Fla., says:

Ernest Kreher, president of a shipbuilding company here, whose refusal to subscribe to the Liberty Loan caused a strike of shipyard employes, has resigned at a called meeting of the company's board of directors.

After electing a new president, the directors instructed him to purchase \$5000 worth of Liberty bonds. The striking employes are expected to return to work Monday.

Kreher is reported to have said he would not sanction the purchase because the money would be used to make war on his relatives in Germany.

It is reported that Mr. Kreher claimed that he was an American citizen, but that being of German birth he refused to join in the purchase of Liberty Bonds because he did not want the money to be used against Germany. Mr. Kreher may be an American citizen, but he is not the kind of which America can be proud. Indeed, he is the kind which should not have the privilege of citizenship in our country.

Mr. Kreher has been a prominent shipbuilder. He and his associates have been largely identified with big shipbuilding operations at Tampa. Some of those associated with him are close personal friends of the MANUFACTURERS RECORD, but we are glad that the men identified with the company as directors had the backbone to accept his resignation and then to make a subscription to the Liberty Loan.

There are too many Kreheres in this country. We are cursed with many people of German descent or German birth who at this crucial time in the life of this nation are false to their citizenship and to the oath of citizenship, if they became citizens by their own free will, when they swore allegiance to the United States and forswore any allegiance to Germany. The worst enemies this country has are men of this stamp. They are to be found in many places prominent in business, prominent in church, prominent in the ramifications of trade, but the time has come, with this country at war with Germany, for the real citizens to know where every man stands.

The man living in this country as a citizen of it, whether by birth or adoption, who is not wholeheartedly backing the United States in this fight is a traitor, and the Government and the people of the country should so recognize him. The time has long passed for leniency on the part of the Government or of the people in dealing with or in thinking of such individuals. They are traitors and their heads are filled with hostility to the United States Government in its war, and they would prefer to see Germany win. Such men must be hunted out by the Government and classed as alien enemies or straight-out traitors. Let us not mince words any longer on such a subject.

Mr. Kreher is no doubt a business man of ability. He has been an active factor in the development of the shipbuilding interests of Tampa. He has numbered among his friends many of the leading people of Tampa. But in a war such as we are now engaged in personal friendships cannot count against those who stand for Germany, with all of its fearful work against the United States. There is only one line of demarcation in this country today. On one side stand those who morally, financially and physically are upholding the country; on the other stand the traitors. This line of demarcation must be made very clear and distinct.

The Tampa Tribune, editorially commenting upon the Kreher incident, states the case clearly, and the people and the press of this country must stand as the Tampa people have done in this matter. The Tribune says:

The Kreher incident, which developed in the course of the Rotary Club's Liberty Bond campaign, proved a live local sensation, and not only aroused unusual indignation among the people, but also caused a strike of the employes of the Kreher plant.

Mr. Kreher has, in a signed statement to the Rotary committee to which he made his unfortunate remarks, withdrawn and retracted everything he said, but this retraction does not, in the minds of a great many citizens, relieve the gravity of his utterances.

An American in Germany, placed in the same position as Mr. Kreher was here, and making such remarks, would doubtless not have lived to make a retraction. Germany has killed or imprisoned many persons for lesser offenses against her national dignity.

Every resident of the United States, wherever born, must

bear in mind that this country is now actually at war, and that it has the right to exact of him the fullest loyalty to its cause.

If one entertains sentiments of opposition to the Government of the United States or to any of its activities or movements in furtherance of the war, he must keep those sentiments to himself or suffer the consequences.

This is a land of "free speech," but "free speech" has a strict and unyielding limit in a time like this. The privilege cannot be stretched to cover or excuse declarations of hostility to the Government. Now, and for some time to come, there is but one kind of American, and that is the loyal American. A resident of this country is either that kind of an American or he is not an American, and to be considered and treated as an enemy of the country.

Tampa has had but little of this sort of thing, but it is time that Tampa awoke to the fact that a serious situation is upon us and that the slightest suggestion of treason or sedition, expressed or implied, must be visited with the displeasure of the community and with such punishment as the Government may provide through its courts and its officers.

The Tribune regrets the unfortunate mistake of a citizen of Tampa, who has enjoyed the confidence and respect of the public, but it will serve to place all others upon notice that this sort of talk is not to be tolerated or excused; that those who are loyal at heart to the Government are expected to show that loyalty by word and deed, and that those who are disloyal at heart must keep it to themselves. Not only public sentiment, but the law of the land will see to it that those who are against us in sentiment are not allowed to be against us in word or action; that wherever you were born, under whatever flag you were reared, you are now in the United States and under the United States flag, and you must be either an American or an enemy, and if you elect to be the latter, you must expect to be treated as an enemy and placed where you can do this country no injury as long as this war lasts.

The Tampa Times is equally as emphatic on the subject as the Tribune, and editorially discussing Mr. Kreher's serious break, said:

The Times regrets the refusal of Ernest Kreher, who has met with decided success since he came to this country and city from Germany, to respond to the call of the Rotary Club committee to buy Liberty Bonds and thereby assist the United States not only in defending the national honor, but in warring against murder and rapine as they are being committed against the women and children of European countries. This paper has always respected Mr. Kreher as a man and developer, and it appreciated the fact that he naturally has a feeling of sympathy for the people of his native land, but as he has long claimed the rights of American citizenship, and has prospered under those rights, he should be an American in fact as well as in name.

This incident can be used to advantage by our people, and it should teach them this lesson—that when one claims to be an American one must be an American, heart and soul, whether he be born in Germany, Italy, England, France, Spain or the Fiji Islands. We offer freedom to the people of other countries, and they come to the United States because of that offer. Therefore, if the freedom we offer is worth anything, it is worthy of fidelity of spirit. If not, the beneficiaries should get out of the country.

This war will teach Americans many things, among which is the fact that, in order to preserve this democratic government, the lines must be drawn closer and closer as immigration increases. If we should ever be whipped from the outside, that whipping would be administered because we had lost "inside strength," and that is what we cannot and will not lose if we are true to the ideals our forefathers bequeathed to us in blood.

Mr. Kreher has made a mistake which is regretted by his friends. We hope, however, that he will profit by this mistake and be as good an American in war as he has been in business.

## HANDLING GRAIN IN SOUTH.

**T**HE Dixie Seed Farms of Cordele, Ga., write that they are building a warehouse to store grain in, and that they want to put in an up-to-date cleaning plant for seed of all kinds. They propose to take corn in the shuck, velvet beans in the hull, and grain and seed from car or wagons and deposit them on the second floor of their warehouse. Referring to some equipment that they desire, they write:

"We hate to bother you, but the grain season is on top of us, and what we do must be done at once."

THE MANUFACTURERS RECORD is glad to have all inquires of this kind. If it can serve its readers by putting them in touch with makers or sellers of machinery or equipment, it is helping them, and thus in part fulfilling its mission. It is, moreover, especially glad to have the opportunity of recording any movement looking to the supplying of the equipment needed in the South for handling and storing grain, beans or kindred agricultural products.

## ONE OF PRESIDENT WILSON'S HANDICAPS.

**O**NE illustration of the bad effect of the unwise statements put out by Assistant Secretary Vrooman of the Department of Agriculture is indicated in the Jacksonville Times-Union in reviewing some of Mr. Vrooman's statements, in the course of which it says:

But it is a bad idea in view of the need of food-control legislation to threaten the people of one-third of the country that food will be sent to Europe for the armies of all the nations at war with Germany even if they starve at home. It will naturally tend to make them unwilling to place food control in the hands of those who would use their power in this way. Of course nobody thinks the South is or will be in danger of starvation, but it would be natural for people to object to putting in the hands of a man who would make such a threat power that might help him to carry it out.

The MANUFACTURERS RECORD is heartily in favor of food-control legislation, but it would fight such a bill with all the influence it could command, even if President Wilson were fighting for it, if it supposed for a moment that the food-control situation would be dominated by such influences as those which have permitted Mr. Vrooman to go around the country threatening the South with starvation through inability to have the use of any cars for the shipment of foodstuff from the West. It is such asinine work as this that throws upon the intelligent, responsible men in Washington the burden of having to carry not only their own load, but the load that is forced upon them and upon the country by such unwise work as that of which Mr. Vrooman has been guilty.

There are a great many other people in Washington who are as unable to measure up to the situation as is Mr. Vrooman. It is a pity that the Administration cannot rid itself of the load. President Wilson's burden is too great for him to be handicapped by small men and inefficiency.

## WHERE SHALL THE FIGHT BE MADE?

**R**EV. DR. JOHN KELMAN, formerly rector of St. George Episcopal Church in Edinburgh, and later in the British service on the firing line in Flanders, while visiting Atlanta last week delivered an address on the war situation. Referring to this, the Atlanta Constitution says:

That Germany had set before her the plan, conceived by her leaders years ago, to conquer first France, then England and after that America, was confidently asserted by Dr. John Kelman, the famous English preacher, formerly Rector of St. George's Episcopal Church in Edinburgh and later in the British service on the firing line in Flanders, in a speech made yesterday afternoon to an audience of between four and five thousand at the Auditorium.

Rarely has a visit in Atlanta been received by a larger or more enthusiastic audience, and while the speaker was late in reaching the Auditorium and kept the crowd for an hour, not a man left while he told Atlantans of what he had seen on the battle front and the causes that were actuating the United States, as well as England, in the war.

Dr. Kelman said that flags had been captured some time ago by the British from the German trenches bearing the inscription: "This year, Paris; next year, London; the year after, America." That was long before the United States had declared war against Germany.

"You have your choice in the war with Germany whether you will fight them on the other side of the Atlantic or on this side," declared Dr. Kelman. "Otherwise you have no choice."

While the statements made by Dr. Kelman may be new to some people in this country, we cannot understand how anyone could have studied the course of Germany during the last few years, even before the war, and then from the day the war began, without fully realizing that that country had definitely determined to conquer the United States, and that all its plans were made with that in view.

Dr. Kelman's statement that unless we whip Germany on the other side we shall have to fight Germany on this side is unquestionably true; and if we should have to fight Germany on this side we would have to endure the horrors of the kind of warfare which Germany has made upon Belgium and France—horrors which are beyond anything which the human mind had ever conceived of.



## The Supreme Necessity of Ships Strikingly Stated

WE reprint an editorial from our issue of June 14 and alongside of it the statement issued on June 15 as from the National Committee of Patriotic and Defense Societies by Mr. R. B. Price, who is vice-president of the United States Rubber Co. The statements made in Mr. Price's paper fully confirm the urgency of the shipbuilding situation as presented for months by the MANUFACTURERS RECORD. We print his statement and one of our editorials of last week side by side in this way to emphasize the tremendous importance of moving quickly and on a gigantic scale for shipbuilding.

Mr. Price's statement is not, we believe, unduly alarming. It indicates a desperate situation, and a desperate situation always needs a heroic remedy. **We can fully meet the situation if the people of this country are awakened to it, but there has been too much disposition to ignore the seriousness of our position and to take it for granted that everything will work out all right regardless of what we do or do not do.**

It is time for the American people to realize fully that never before in the history of this nation has its task been so tremendous, even as compared with the results of the past. In all the wars of the past, even in that of 1776, the world's civilization and our existence as a nation were never at stake to the same extent that they are at stake today. Will our people awaken and with the utmost energy of men and women hereafter throw the whole soul and life of the country into war activity?

### BUILD SHIPS!

[Manufacturers Record, June 14.]

Build ships; build them of wood and steel; build them as rapidly as the limitless financial powers of the country and the men available make possible. Every day's delay endangers the life of the Allies, and that means our life.

Ships for foodstuffs, for munitions, for coal, for steel, and other things so desperately needed by the Allies must be built, and built wherever it is possible to secure the establishment of shipyards for their construction. They must be built of wood and of steel, for it is impossible to build enough of either kind alone to meet the danger of the hour.

The MANUFACTURERS RECORD weighs well the meaning of its words when it says that success by the Allies and our success through the help of the Allies hangs today in the balance unless we build ships, and build them rapidly, without regard to whether they are built of wood or of steel, or without regard to the question of immediate cost.

All in vain shall we increase our food supply and our output of steel and train our army unless we build ships on a much larger scale and much more rapidly than there is yet any indication of our doing.

Washington authorities and the nation must awake before it is too late. Every day's delay adds to the danger.

### STATEMENT BY NATIONAL COMMITTEE OF PATRIOTIC AND DEFENSE SOCIETIES.

[June 15.]

Probably history will say that Lord Northcliffe, in risking life, wealth and reputation to give Great Britain truths that were either not appreciated or officially admitted, contributed materially toward saving his country from disaster. In America today the same problem exists. Grave warnings are issued by important officers of our Government, but in many official quarters the question is asked, "What good does it do to alarm the people?"

If the chosen leaders of democracy are afraid to tell us the full dangers confronting the nation, can democracy be the strong, virile force we are relying upon for the salvation of humanity? Can it compete with autocracy? Is it worth fighting and sacrificing for? There can be but one answer. So let us have plain facts whose import shall not be lessened by the generous gratitude of our allies for what we have already done.

No matter how well we have prepared to meet our obligations in this war, if the need is yet greater we have so far failed. Most of us must admit that under added pressure or greater inspiration he could have accomplished more. If facts like the following had been driven home to our people during the past months, is it not certain that we should have more men, more money, more ships, more supplies, more speed, because delays very visible at times would not have been tolerated?

Consider well these facts:

1. Italian munition plants run part time for want of coal. Germany is not worried over the Italian offensive, because she knows it is limited by lack of coal. Unless we can send Italy 250,000 tons of coal per month she cannot long continue her offensive military operations. The ships are not today in sight to carry that coal to Italy.

2. The Italian and French navies are crippled for lack of fuel. Germany knows this and seeks to destroy coal and oil ships above all others.

3. If fuel becomes increasingly scarce as it has for some months past, the British fleet next fall will be so restricted that the German fleet can escape. Then, indeed, will hell be let loose on our own unprepared shores.

4. Germany had her greatest food shortage over a year ago. With 42,000,000 people in her captured territories—almost the population of the British Isles—to use as she can, to till the fertile soil of food-exporting Poland and Roumania, she is not to be starved this year, nor next, nor any other year, as things look today.

5. America must rebuild and re-equip the railroads of France, and perhaps of Russia, to win this war. Some experts say we must, to conquer Germany, send 500,000 workmen, mechanics and railroad operatives, besides an army of from 1,000,000 to 5,000,000 men to France. A good start, even, cannot be made within one year, and perhaps two or three years. Do you know that to maintain 5,000,000 men chiefly in England and just across the 21-mile-wide English Channel in France Great Britain requisitioned one-fourth of the entire merchant tonnage of the world?

6. During the war nearly one-eighth the merchant tonnage of the earth has been destroyed. This is double what has been launched in the same period.

7. If not another ship were destroyed by mine or submarine from now on, we still could not send 1,000,000 men to France and maintain them one year from today.

8. Nobody has yet added together the total new demands alone for tonnage, and yet new needs of appalling magnitude are appearing every week. Great Britain's army of 5,000,000 in the year 1915-16 consumed more meat than the entire British nation, 46,000,000 strong, in 1913. And yet there are not enough ships to meet the needs of last year, when we steadily went backward. How are we to meet the new demands for cargo space that our entrance into the war involves? An increasing number of ships will be available next year, but the addition for the next eight months are pitifully inadequate. England says one ship this year is worth six next year.

9. How fateful are the next eight months, when Italy may succumb, when Russia appears helpless, when even the glorious British fleet, the sole savior of the United States for the past three years, may be rendered impotent? Is it not clear that "fighting for democracy" is for America but part of the case? We are fighting for our very lives.

Who says we have met our full obligations? Under no

conceivable conditions can we build all the ships we ought to have during the next eight months. How close we come to it depends in part upon how well we, of these Patriotic Societies, bring the need home to our people. Then may the pressure of enlightened public opinion urge Congress and the Executive Staff of the nation, with their co-operating agencies, to their utmost in speed, efficiency and unselfishness, and adequate attention to the greatest need confronting us at this moment—every extra ship possible during the next eight months.

### THE FINANCIAL SLACKER MUST BE CONSCRIPTED OR IMPRISONED.

THE subscription to the Liberty Loan by the heroic work of tens of thousands of volunteers in the cause has stimulated the activity and the thought of the whole country on the war situation, but the number of subscriptions was not one-third as great as it should have been. The bankers of the country who led in this work felt at the beginning that unless there were 10,000,000 subscribers the loan would not have reached the popular sentiment of the country to the extent necessary for the best results. This may have been too high an estimate, but it was based on the fact that the last loan in Great Britain had nearly 8,000,000 subscribers, or one out of every six in population. A similar percentage in this country would give about 18,000,000 or more. That, however, was not to be expected.

That the loan was oversubscribed was due to the magnificent work of many people in all sections of the country, and to the aid rendered by newspapers and periodicals, but it is an interesting fact, in view of the bitterness with which Wall Street is constantly assailed by narrow-minded people, that New York subscribed more than half of the total of \$2,000,000,000, showing a patriotism which in proportion to population and wealth far exceeded that shown in the rest of the country.

All through the country there were subscriptions of a thousand or two dollars from men who should have subscribed to ten, twenty or thirty times as much.

Another loan, however, will have to be taken within the next three or four months, and we shall have to keep on issuing new loans to the extent probably of \$8,000,000,000 to \$10,000,000,000 a year, and the country must of necessity absorb them.

The campaign for broadening the interest of the people of the whole country in these war loans must, therefore, be continued with unabated energy, and men who subscribed a mere pittance for the Liberty Loan must be shamed, if no other way is available, into a subscription in keeping with their ability for the coming loans.

This raises the question as to how the country shall reach those of pro-German proclivities who refused to become subscribers to the Liberty Loan. There are many men of large wealth in this country who have little patriotism in their souls and others of large wealth who, although citizens, are still more interested in Germany than in this country, who will not subscribe to these loans unless it be on a beggarly basis, and some of them will not subscribe at all unless compelled to do so.

We believe that the National Government must find a way to thoroughly investigate cases of this kind, and under some law, possibly, yet to be passed, compel subscriptions from people of this kind and make them in this way contribute to the welfare of the nation.

There are many men of this class who are neither giving themselves nor contributing their money to the nation's life. They are keeping their own hides whole and using their business and their capacity to make larger profits in this time of stress while the real patriots are offering their lives, their money or their time and their energy to the nation's welfare. A way must be found to reach these "slackers" because of their pro-German proclivities or of their disposition to "hog it" all and use their money for larger earnings at the expense of their fellow-men. If we hunt out and imprison the slacker for army service, let us hunt out and take a part of his money of the slacker in financial operations who fails to do his duty by the Government or imprison him.

### GERMANS POLICING UNITED STATES.

A COMMISSIONED officer of the United States army is authority for the statement that this country is being policed by Germans at the present time. He says:

"Many of the more rabid anarchists, those who hold their lives lightly if the causes of the Fatherland can be advanced, and German plotters are being held in check by German citizens of the United States, those who have interests here and who see the futility of a German uprising in this country at this time. These Germans, few of whom are to be trusted under ordinary circumstances, when it comes to a question as between Germany and the United States, realize that all their financial, family and other interests are at stake, and they are exercising a restraining influence upon those who are ready for any aggressive act against this country. It is not the military, the police or the various home guards who are chiefly responsible for the maintenance of order and the suppression of outbreaks of incendiarism, bomb-throwing and other acts of violence by the more rabid Germans, but the suppression of these is due to the Germans of the better class who have to live here and whose financial interests are here." — Wall Street Journal.

It is well to bear this statement in mind and remember that every pro-German, whether naturalized or not, is a foe to this country, and would be ready "at this time," if it were a propitious time, to rise in revolt against the United States. The detention camp or the penitentiary is the only proper place for all such, however rich or however poor they may be. Our country will be compelled to learn this at a heavy cost if it does not appreciate the situation now. And we say this advisedly, though it would include many whom we have known and highly esteemed for years. In this hour, however, no ties of friendship should for one moment hold the country back from taking every step needed to strengthen our forces and save the men who are risking their lives in this struggle for the nation's life.

Every man and woman who is not aggressively for the United States now will, if not interned or imprisoned, be a factor in helping the Kaiser in his cold-blooded murdering of American soldiers and sailors.

## COTTON CONSUMPTION STEADILY INCREASING.

**D**URING May, according to the Census Bureau report, 615,171 bales of cotton were consumed, against 575,566 bales in May, 1916, an increase of 39,605 bales, or 6.9 per cent., while the total consumption of cotton in this country for the ten months ending with May 31, 1917, amounted to 5,684,570 bales, an increase of 347,082 bales, or 6.5 per cent., compared with the 5,337,488 bales used in the corresponding period of 1916. The increases in the amount of cotton consumed for both the month of May and for the ten months ending with May 31, 1917, as compared with the figures for the corresponding period of 1916, show a gain over the 3.7 per cent. increase for last April and the 6 per cent. increase made during the nine months ending April 30, 1917, compared with the 1916 consumption of April and the nine months ending April 30.

Cotton on hand May 30, 1917, in consuming establishments and in public storage and at compresses amounts to 3,852,262 bales, compared with 4,118,336 bales reported in 1916, a decrease of 266,074 bales, or 6.5 per cent.

In the cotton-growing States 350,993 bales were consumed in May, 1917, in comparison with 324,492 bales last year, a gain of 26,501 bales, or 8.2 per cent., against the 6.9 per cent. increase in the whole country.

For the ten months ending May 31, 1917, the cotton-growing States consumed 3,262,048 bales, or 839,526 bales more than was consumed in all the other

The influence of high food prices in stimulating larger production, the danger of low prices in lessening farm operations, the waste between the producer and consumer, the requirements of our Allies are all problems which demand the broadest investigations and the ablest skill in handling. The consumers must be protected from unscrupulous gougers and cornerers, and the growers must be insured profitable prices. A wisely-managed food commission, operating under proper laws, can do this, and Congress should pass a bill as quickly as possible. This is no time to play politics.

## HAD ROOSEVELT BEEN IN LONDON.

[Louisville Courier-Journal.]

**G**ENERAL PERSHING is an excellent soldier a trained and seasoned man. Americans are glad to have him in France as the standard-bearer of the cause of freedom. They know that he will prove his capability as well as his mettle. Yet there was in the meeting between General Pershing and King George of Great Britain a conspicuous lack of the valuable psychological effect upon Europe that would have attended a meeting between the King of Great Britain and Theodore Roosevelt.

A former President of the United States, a famous American, a plainsman—an amateur plainsman if you will, but nevertheless a figure seen by Europeans in buckskin breeches and a sombrero; in an African hunter's garb, and in the costume of a civilian amid the gilt and glitter of military uniforms shaking hands with the Kaiser in Europe's happier days, an erstwhile distinguished visitor returning to Europe as the champion of liberty, would have thrilled Europe to the bone.

The effect would have been felt upon the Rhine, the

Locality.	Year.	Cotton Consumed During (bales)		Cotton on Hand May 31, In consuming establishments (bales)	
		May.	10 months ending May 31.	May 31.	In public storage and at compresses (bales).
United States.....	1917	615,171	5,684,570	1,899,064	3,852,262
	1916	575,566	5,337,488	1,975,065	4,118,336
Cotton-growing States.....	1917	350,993	3,262,048	918,173	1,664,401
	1916	324,492	2,935,286	969,460	1,832,226
All other States.....	1917	264,178	2,422,522	980,911	288,777
	1916	251,074	2,402,202	1,005,625	311,025

\*Includes 27,915 bales of foreign and 8982 bales of sea-island consumed, 100,019 bales of foreign and 46,687 bales of sea-island held in consuming establishments, and 51,261 bales of foreign and 27,390 bales of sea-island held in public storage.

Linters not included above were 82,359 bales consumed during May in 1917 and 73,594 bales in 1916, 128,372 bales on hand in consuming establishments on May 31, 1917, and 85,962 bales in 1916, and 255,135 bales in public storage and at compresses in 1917, and 171,839 bales in 1916. Linters consumed during ten months ending May 31 amounted to 699,308 bales in 1917 and 751,781 bales in 1916.

States. This is a larger increase by 306,442 bales than the 533,084-bale gain the South made over the cotton consumption of the rest of the country during the ten-month period of 1916.

Our total exports of domestic cotton in May reached 375,822 bales, including 73,063 bales of linters, and in May, 1916, we exported 510,081 bales, of which 37,516 were of linters. This gives us a decrease for May, 1917, in cotton and linter exports compared with May, 1916, of 134,259 bales, or 26.3 per cent., although the total cotton and linter exports for the ten months ending May 31, 1917, which amounted to 5,221,703 bales, are 60,272 bales more than were exported during the ten months ending on the same date last year. Included in this total are 394,830 bales of linters exported during the ten months ending May 31, 1917, and 189,638 bales in 1916.

Our total imports of cotton in May, 1917, were 12,387 bales, and in May, 1916, 32,602 bales, while the total foreign cotton imports for the ten months ending May 31, 1917, were 255,339 bales, and 414,135 bales in 1916.

The accompanying table gives the quantity of cotton consumed on hand in spinning mills and other establishments for the month of May, 1917 and 1916, with statistics for the ten months ending May 31.

## FOOD COMMISSION NEEDED IMMEDIATELY.

**P**RESIDENT WILSON has asked for a food control measure. It should be granted promptly. The food shortage, especially in wheat, meats and potatoes, is very acute, and will grow more so. This shortage would alone justify high prices, and when to this is added world conditions and credit expansion we have economic forces which necessarily compel what might seem exorbitant costs for food. Nevertheless, these conditions may be used by unscrupulous men to corner food products and force prices beyond any reasonable figures.

Danube, the Weser, the Elbe and the Oder, as well as upon the Marne, the Meuse, the Grand Morin, the Seine and the Loire. It would have been felt no less upon the Volga and the Vistula and Dvina, the Dnieper and the Don. Roosevelt in England, en route for France, might, conceivably, have been worth more to the cause of the Allies than the labors of Elihu Root in Petrograd, at a crisis in Russia which is a crisis in the affairs of Western Europe and America.

Not only the chevroned French soldier in the trenches would have warmed to the spectacle, but also the groping Russian who may handle his freedom as ignorantly as Epaminondas in the nursery fable handled the butter which he carried home under his hat to keep it sheltered from the sun.

The attitude of the professional soldier always is that the civilian in uniform is an obstacle to military success, and that the notable citizen whose advocates seek to make use of his prominence is a nuisance. Nevertheless, had Theodore Roosevelt landed in an English port, the band playing "The Star-Spangled Banner," and gone to shake hands with the King, everyone in Europe who could read would have been impressed by the event. Every citizen and soldier of the countries allied against Germany would have been inspired by it.

An opportunity has been overlooked.

Because the MANUFACTURERS RECORD vigorously urged that Roosevelt be permitted to take his proposed troops to France for the very reasons so clearly stated by Henry Watterson in the foregoing editorial, we were vigorously criticized by some of our readers. Nevertheless, the case stands exactly as presented by Colonel Watterson. The furore over Roosevelt in Europe would have steadied Russia and shaken the Kaiser's throne, for, whatever Americans may say for or against him, he is one of the world's spectacular characters, wielding unprecedented personal influence among the peoples of Europe. Over there his name is one to conjure with and that would mean much. In Russia, for instance, a million people know of and esteem Roosevelt for every hundred who ever heard of Root, though the latter is indeed a greater statesman and diplomatist than Roosevelt. We missed a chance to influence millions and tens of millions by refusing to let Roosevelt go. Is it too late?

## A GREAT SOUTHERN PAPER.

[The Review, Reidsville, N. C.]

**I**F a vote were to be taken today upon the question of what newspaper, magazine or periodical published in the South constituted the truest exponent of real patriotism, we believe a tremendous majority would proclaim the MANUFACTURERS RECORD, published in Baltimore, Md., as more fully meeting the requirements of an interpretation of true patriotism than any other publication issued, not only in the South, but throughout the United States.

During the past three years of stress, when large numbers of our daily organs were playing fast and loose with our attitude in relation to the wholesale blackguardism of the Hohenzollern cohorts, and even later, when lack of stalwart backbone constituted little less than veiled traitorism; in the face of constant irritation from a horde of German dachshunds, snapping at the heels of this great mastiff, and at a time when the publishers of papers or magazines had almost reached the limit of endurance in the light of unheard-of advances in cost of production, the MANUFACTURERS RECORD has stood foursquare to the blast of criticism and denunciation, and never receded one iota from the stalwart, honest stand it took when Belgium was invaded, and the new Germany showed to the world its dastardly policy of frightfulness. It has never failed to print, in the cleanest, clear-cut English its abhorrence of the acts and policy of the Hohenzollern, and its hatred of the treasonable hyphenated American, or its equally strong love and admiration of the citizen of the German descent who, coming to this free land to participate in its blessings—and benefits, expressed a loathing for the hellish disregard for the principles of Christianity shown in the conduct of a war, originated by Germany for the sole purpose of satisfying the beastly greed of a besotted Kaiser, bent on world conquest.

The MANUFACTURERS RECORD represents the aristocracy of Southern patriotism. It is the greatest exponent of Southern development and Southern progress. Isolated communities, living far from the marts of commerce; Boards of Trade and Chambers of Commerce; leaders in the industrial world, small and great; retired manufacturers and merchants; progressive, wide-awake farmers, and live business men of the business development throughout the Southland; and to many a progressive secretary of Boards of Trade, laboring under the terrible handicap of an unresponsive backing and fast approaching condition of hopeless despair, the MANUFACTURERS RECORD has come with its weekly message of accomplishment throughout the great South, and by its spirit of cheerful optimism brought life and light to the dark places of our country.

It takes backbone to present, week after week, during periods of such stress as the world has gone through for the past three years, a smiling face and an unchanging front to the apparently increasing sympathizers with the nation running amuck in blood and bestiality. It takes courage to print in plain English week after week, under such conditions, even authenticated facts of such almost inconceivable beastliness about a nation hitherto credited with common decency. To the MANUFACTURERS RECORD we give the palm for an exhibition of manly courage of the finest kind in these horrible circumstances, and to our readers we commend its pages as an epitome of all that is cleanest and best in our civilization.

The MANUFACTURERS RECORD cannot attempt to express its appreciation of this high praise of its work from one with whom it has no personal acquaintanceship. It has never received a tribute which more deeply touched its heartstrings than this from the Reidsville Review.

## TURNING CITY SEWAGE INTO AN ASSET.

**T**HROUGH installation of modern sewerage and garbage disposal systems many cities of this country are securing valuable by-products from waste, but our municipalities could probably emulate to advantage the method adopted by an English city in creating an asset out of a waste effluent difficult of disposal. According to a statement in Commerce Reports by the United States consul at Bradford, England, that city recovers the grease in the sewage coming from the many wool-washing and scouring establishments located there and turns it into a profitable by-product.

This grease by-product is said to be of value in the leather-dressing trade and to some extent in branches of the textile industry.

The sales of the recovered grease by the sewage works of the city of Bradford were reported to amount to \$389,320 in 1916 at the present high price of \$122 a ton, and it is estimated that for this year over \$340,000 will be realized from this source, in addition to nearly \$25,000 derived from the sale of manure or fertilizer made from the sludge left after the extraction of the grease. Because of the development of this by-product it is thought the Bradford sewage works will be self-supporting in 1917.



## SOME UNPRINCIPLED MISREPRESENTATIONS SENT OUT BY A WASHINGTON REPUBLICAN PUBLICITY BUREAU.

IF the Republican party does not want to forever damn itself in the eyes of right-thinking people, whether they be Republicans or Democrats, it would be wise to get rid of the Publicity Department which is now constantly loading the mails of the country with stuff sent out from Washington, much of which is wholly unworthy to be issued in the interest of any right-thinking people, and especially in such times as these. The leaders in the Republican party surely cannot be responsible for permitting this kind of stuff to be sent out, for they are seeking to uphold the country, not to falsify the whole situation. It should be suppressed. The following is a sample of much that is thus sent out:

S-610 SENT TO A FEW SELECTED PAPERS.

Special For Immediate Release.

6-12-17

### THE JAMESTOWN PURCHASE GRAFT.

Washington, June —. (Special Correspondence.) — The House has refused to agree to the Senate's proposal to buy the property of the Jamestown Exposition for a naval training station. The property was bought in at a receivers' sale a few years ago for \$240,000. Its owners immediately tried to unload it upon the Government, but Congress has always turned a deaf ear to their plea until now, under pressure from Secretary Daniels and upon the plea of "war necessity," when it is proposed to pay \$1,400,000 for the property with some more land added, and to expend the further sum of \$1,600,000 in improvements.

The Secretary of the Navy has said that he will fight the issue to the bitter end. His determination has aroused little surprise in Washington. The Jamestown property is in Virginia—and the heart of every member of the administration beats warmly for the old flag and an appropriation, with some added throbs whenever the appropriation runs into seven figures and is to be expended south of Mason and Dixon's line.

The debate in the House disclosed not only the exorbitant price which is put upon the Jamestown property and the excessive profits which its owners will realize if the deal goes through, but it also demonstrated the small value of the property from a strategic point of view. The exposition grounds are easily accessible from the sea, the coast defenses of Chesapeake Bay are notoriously weak, and a naval station at Jamestown would be vulnerable in the extreme. In addition, the shore front there is of such a nature that it will require a dredging operation extending more than a quarter of a mile from the land to provide a sufficient depth of water for an anchorage.

The Secretary's passion for Jamestown is geographically understandable. Financially and strategically it has little to commend it. The best minds of the navy have long dwelt upon the advisability and the desirability of establishing the great naval base of the Atlantic seaboard on Narragansett Bay, where the Naval War College is now located, where a naval station now exists, where the depth of water, the ease of defense, the climatic and maritime conditions, the easy steaming distance from great and rich ports, all combine to form the ideal location for a great centralized naval base. It is probable that land for this purpose can be obtained near Jamestown, Rhode Island, as easily as near Jamestown, Virginia—and the prices can hardly be in excess of those which the latter locality demands. A Secretary of the Navy who hails from Raleigh, North Carolina, however, will probably plead political and geographic strabismus in defense of the choice he has made.

It would seem to be almost unnecessary to deny such bald misrepresentations and falsehoods, and such an effort to discredit the Government and to create throughout the country an absolutely false and baseless opinion as to the reasons for the selection by the Navy of the site on Hampton Roads, and yet something must be said, or some people might otherwise believe these statements.

The MANUFACTURERS RECORD has not always agreed with Secretary Daniels, but we are more than glad to give him credit for all the good that he has done or may do. To charge him, as the foregoing statement does, with being dominated in selecting this site by the fact that he is a North Carolinian is false, unpatriotic and calculated to come under the heading of "giving comfort and aid to the enemy."

Our naval officers have always realized the unequalled advantages of Hampton Roads as a base for a great naval station, and for all the things connected with the development of a great naval base. For years, long before Daniels was ever thought of as Secretary of the Navy, naval officers recognized the unequalled advantages of the Hampton Roads section; indeed, the greatest experts in the world understand the unusual advantages of that region, and Republican Secretaries of the Navy

even in peace days advocated this purchase long before Daniels' day.

We have no information in regard to the intrinsic value of the property, but in view of the rapid development of all the waterfront at Norfolk there must of necessity have been an amazing increase in values of recent years. At Baltimore, for instance, waterfront property which two years ago could have been bought for a few hundred dollars per acre now commands in many cases from \$8000 to \$10,000 an acre. Similar conditions exist elsewhere.

The effort in this statement from the Republican Publicity Department to create the impression of graft is indicated in the words "with some more land added," without the slightest intimation as to the extent of the land included in this additional tract.

If the coast defenses of Chesapeake Bay are "notoriously weak," as this statement says, then Washington and Baltimore are at the mercy of a foe, and the great shipyards at Newport News, the most important in the country, the great naval station at Portsmouth and the shipyards at Baltimore are liable to destruction.

If a naval station at Jamestown would be "vulnerable in the extreme," as stated in this report, then the safety of the country demands the immediate construction of such fortifications as will make the entrance to the Chesapeake Bay, and the approach to Washington and Baltimore, Norfolk, Newport News, and through Washington and Baltimore to the heart of the country, impregnable against a foe. Moreover, the writer of that article knew that plans have long been under way for the construction at the capes of an impregnable fort.

If once an enemy could break through the defenses at Hampton Roads and capture Washington and Baltimore, he could easily take New York and Philadelphia in the rear, and thus end the contest.

These are a few of the misrepresentations, deliberate, intentional, vicious and unprincipled, which discredit any organization which sends them out; and if the Republican party can find no better publicity agent than the bureau which now issues this stuff, it would indeed seem to be hard up for honest, intelligent, constructive criticism. The men in the Republican party who stand for honor and integrity should not permit such stuff to go forth, to the discredit not only of the party, but of the country.

## THE ONLY SURE BASIS FOR WAR SUCCESS.

UNDER the heading "Goethals Saw the Point," the Dallas News tells a story of a Beaumont business man who was soliciting a contract for building ships from General Goethals. The fact that this man's firm had never been engaged in shipbuilding promised to militate against his getting the contract, and the lack of any experience in shipbuilding was mentioned during the conference with General Goethals.

"Your firm has never constructed ships?" said the General.

"No, sir."

"Well," pressed the Government's representative.

"General, you built the Panama Canal?" replied McBride.

"So they say," was the answer.

"Did you ever build a canal before?" General Goethals saw the point.

We trust that General Goethals, who has admitted to his lack of knowledge as to shipbuilding, will see a good many other points, and see them very promptly. These points are the necessity of building every wooden ship that can possibly be constructed, as though a steel ship had never been heard of, and at the same time to build as many steel ships as possible, and build them as rapidly as possible, as though there was no such thing in the world as a wooden ship.

The shipyards of New England, of the South Atlantic, the Gulf Coast and the Pacific Coast, and all the yards that can be established with sufficient capital and in the hands of men of experience, should be put to work building ships as though this nation had nothing else on earth to do except to build ships.

The army must be organized and trained on a

basis that the army, and the army alone, can save the nation.

The navy must be organized and trained as though upon the navy's work alone depended the success of the war.

We must build a fleet of aeroplanes vast enough in number and of the highest possible construction to make us feel that we could win the war if we had nothing but these aeroplanes.

The farmer must work as though the life of this country and of the Allies depended entirely upon his ability to produce foodstuffs.

And the building of ships must go forward in the same spirit.

Until the full potential power of the nation, with every nerve stretched to the limit, is thrown into all of these activities there will be no safety for us. No one of them can save us. We shall need them all. But each one must be worked as though upon it alone depended success or defeat.

## SOUTHERN PROGRESS SHOWN BY BOND ISSUES FOR PUBLIC IMPROVEMENTS.

TWO telegrams received by the MANUFACTURERS RECORD June 16 report, respectively, the sale of \$1,000,000 bonds by one drainage district in Polk county, Arkansas, and the sale of \$250,000 road bonds by one road district in Monroe county in the same State. They are fair examples of what the South and the Southwest are doing for the improvement and upbuilding of their communities, and this simultaneous disposal of so large an amount of bonds, which, by the way, was taken by a single purchaser, James Gould of Pine Bluff, Ark., should be additional encouragement to other communities to do likewise for their own benefit.

The drainage bonds sold are for the reclamation of 146,000 acres of alluvial land in the St. Francis River basin, which is in the eastern part of Polk county, and the road bonds are for the construction of a portion of the Memphis to Little Rock Highway through the upper part of Monroe county. Both of these counties are in the eastern portion of the State.

Nor are these bonds by any means alone in that part of Arkansas, for there are two other issues just about to be sold for similar purposes, one of them being for \$400,000 of levee bonds in the St. Francis Levee District and the other for \$195,000 of bonds of Road District No. 3 in St. Francis county. Besides, there are many bond issues in other parts of the State.

In fact, public improvements are numerous throughout the South. The building of better roads is especially being looked after, for the disposition of the people is favorable to such loans wherever they can be afforded because of the increasing use of motor vehicles for business as well as for pleasure. Besides, the farmers have come to learn the economic value of good roads also for horse-drawn vehicles, which, on the improved highways, can be loaded with from two to four times the burdens possible when only the old dirt roads existed everywhere. Compared also with the best of the old-fashioned turnpikes, the modern roads also show a tremendous gain for all vehicles in carrying ability, besides less wear and tear.

A glance at the New Securities columns of the MANUFACTURERS RECORD shows what is being done in the Southern States along this and kindred lines of betterment. Bonds not only for drainage and for roads, but also for bridges, sewers, schools, streets, electric lights, courthouses, fire departments and public buildings of various kinds, are being voted and sold all over this section from Maryland to Texas and from Florida to Oklahoma. Last week, for instance, these columns contained seventy-four items from various places in the South concerning a total of several millions of dollars of such securities, which will ultimately be expended for the general welfare of their respective communities.

This displays the spirit of Southern leaders everywhere, and the same spirit which prompts these improvements is that which has lifted the South, once prostrate and destitute, except for faith, courage and capacity, to its present high position in the country—rich, respected and progressive.

## NORTH CAROLINA'S AND GEORGIA'S SHEEP GROWERS' TOLL TO DOGS.

**T**HE Co-operative Extension Work in Agriculture in the State of North Carolina is sending out a circular to the effect that sheep farming is to be encouraged in that State. Attention is called to the fact that this industry has been lagging in North Carolina, and that the production of sheep has been "steadily on the decline on account of lack of proper attention, the gradual encroachment of cultivated fields and the growing menace of dogs."

Will Director Kilgore of the Extension Service tell us how he is going to overcome the "growing menace of dogs" unless the National Government or the State of North Carolina puts such a tax on dogs as would lessen their number in order to increase sheep growing?

There is another way in which this could be accomplished, and that is by permitting no one to own a dog who cannot give bond for any damages done by the dog in the matter of sheep killing. If such a law as this could be put into effect, every dog owner, or his bondsman, would be responsible for the damage for all sheep killed. Combining a law of this kind with a tax on dogs would soon bring about an elimination of many thousands, indeed, perchance, millions, of the worthless curs and sheep-killing dogs which are allowed to run the country free, destroying sheep and killing off an industry essential to the production of foodstuffs.

The Augusta Chronicle, in telling of the destruction of the sheep industry in Georgia by the work of sheep-killing dogs, basing its comments upon some recent facts given in the MANUFACTURERS RECORD, says:

The urgent necessity of conserving every possible source of food supply, to say nothing of increasing it and providing for more clothing along with it, is causing the economic authorities of the country to make a survey of the situation and ascertain just what can be done to augment the supply of food and clothing for this country and the world at large.

A most significant feature in the summary is brought out in the fact that in Pennsylvania, North Carolina, Virginia and Georgia especially the enormous loss of sheep from sheep-killing dogs is amazing.

Report of twelve sheep being killed by dogs, and four being so badly mangled that they had to be killed on the farm of Charles W. E. Ligon, near Ellicott, Md., is recited in the MANUFACTURERS RECORD, and the journal also prints the photograph of a heap of fifty sheep, valued at \$1000, which were killed on a Pennsylvania farm by sheep-killing dogs in one night!

In discussing the serious phases of the question in North Carolina, an authority estimates that in one community there is being spent approximately \$22,000 per year to take care of worthless dogs, to say nothing of the enormous loss coming from the depredations of the dogs.

In regard to this important matter, the MANUFACTURERS RECORD says:

"Does the country prefer to permit these dogs to roam at large without contributing a cent to the national treasury in preference to the raising of sheep when the world is facing possible starvation? The question cannot be put off.

"Do you love dogs, especially worthless curs and hounds, more than you love starving women and children?

"Are you willing to put your own preference as to the love of your dog against the lives of women and children?

"Or are you willing, if you are determined to keep your dog, to pay the Government a tax sufficient to make it sure that there will be fewer worthless dogs roaming the country?

"And are you willing to make certain that your dog shall not become a sheep-killing dog by seeing that he is properly confined at night?

"The question is one which the country must answer, and every individual in it will be responsible for the answer which he gives."

It is a well-known fact among students of agricultural matters that Georgia—once the leading sheep-producing State of the South, and ranking well up to the forefront in the whole nation—is now growing hardly enough sheep to provide any appreciable quantity of either mutton or wool, and the lagging of the industry may be attributed almost wholly to the menace of the sheep-killing dogs, which have made it almost impossible to grow sheep in Georgia.

## WHEN TREASON WILL BE TREATED AS TREASON.

**R**EFERRING to a criticism in the MANUFACTURERS RECORD last week of the speech by Hon. John M. Nelson, consisting of four lines of original statement in order to introduce a near-treason edi-

torial from LaFollette's Weekly, all of which is being circulated under Senator LaFollette's Congressional frank, a correspondent of the MANUFACTURERS RECORD writes:

I see by the number of the MANUFACTURERS RECORD just received that you have treated it as it deserves to be treated. The edge of treason seems to present irresistible fascination for these gentry, but it may prove as dangerous as skating on thin ice. Americans are long suffering and slow to wrath. But when the first casualties are reported from the battle front, it is probable that they will arise in their righteous anger and make short shrift of traitors. Those of the near variety may have the cunning to sing very small then, for they are not without the wisdom of their kind.

## "HAS THIS NO MEANING FOR YOU?"

**H**ERE and there are evidences that men and women alike are to be found who are indifferent to the war; whose hearts have not been touched by its awful tragedies, and who are living as unconcerned as though no war had ever cursed the world.

It has seemed well-nigh impossible to attempt to describe such people, and so we have not tackled the job. But the Nashville Tennessean has done so, and under the head of "Astounding Indifference" it prints the following withering, biting, blasting but just characterization of those who in this hour of tragedy, of sorrow and suffering, of voiceless woe, are indifferent to what is going on in the world. On this subject the Tennessean says:

Said a woman the other day when the war was being discussed by her associates: "I am paying very little attention to the war. I am not interested." Surprising as this admission was, and is, there are others who feel this same astounding indifference in this the greatest crisis that has ever faced the American people.

Can an intelligent man or woman be indifferent now? When almost all the world is at war, and we are fighting for humanity and freedom in a war that has never had an equal in history; when the nations are arrayed against the powers of evil and wrong; when this nation's freedom and future are dependent upon the outcome of the struggle, can there be indifference? Does the contest where millions are arrayed against millions have no meaning to them?

When there are millions of men fighting, when millions of women and children are desolate, hungry and starving; when thousands, if not millions, of homes are wasted and ruined can it be possible that this war has no meaning to you? There are defenseless homes wrecked, wealth reduced to poverty, plenty replaced by dire want of the necessities of life; there are women and children suffering untold agonies, mental and physical; can this have no meaning for you? The bravest and best of our men are forming in battle array and will soon face the enemy on foreign soil in defense of you and your homes, "of your loved ones; can this have no meaning for you? We hear the roar of mighty guns mowing men down as if they were but grass in the fields, and we can almost hear the groans of the wounded, the mutilated and the dying—can this have no meaning for you?

Billions of dollars are being poured out freely for the defense of the nation and for the defense of national ideals; everywhere the people are giving of their treasure, of their sons, of their strength, of their substance, for the perpetuation of your right to live and your liberty to enjoy the earth as God gives you the right to enjoy it; everywhere the talk of war is in the air and the men and women alike are preparing to sacrifice all that they have for the national honor and for the liberty of the nations; has this no meaning to you?

There is a strange apathy, a strange indifference among some of the people—they seem to do nothing, to say nothing, to think of nothing, that will speed the winning of the fight. They go on living in their cold and careless way that can mean nothing but enmity to all around them, taking no part or interest in doing aught that will help in the final conquest of the most brutal enemy that ever accursed the human race—Prussian militarism; can the war mean nothing to them? The man or woman who is indifferent now can have neither pride in the past nor hope for the future; they can have no soul above the mere animal sense that takes no account of aught beyond the mere animality of the day.

The man or the woman who is indifferent today is not American, not human; they are the enemies of humanity, the opponents of the great aims of the gigantic contest we are waging. They belong in the class of traitors, for without sympathy with the great purposes of our fight they help not, only hinder, and clog the mind of others who come in contact with them. Indifference is treachery, is enmity to country and friend, is antipathy to those even of their own households. No man or woman who desires to see this country win and take her proper position as the leader in the road that leads to the light and to freedom, can be indifferent now. They must take sides. There has never before been such a time in history, such

a momentous time, when the fate and the freedom of the world hung so heavily in the balance.

Men and women of America, you cannot be indifferent now. Soon the sons of your neighbors will be embattled, perhaps your own sons and your own kindred; there will be crepe on many doors, showing that of the country's brave defenders some will not return forever; is there no meaning in this for you? Wake up, men and women. Put your purse, your heart, your soul into the crucible, if you have either purse or heart or soul. Be no indifferent, scarcely-observing spectator of the mighty war pageant now passing before you. Do something. Many have given their fortunes, many will give their lives, many will give fathers, brothers, sweethearts, sons; many will give all that remains of happiness in the world—in heaven's name is there nothing that you will give—even a thought?

The man or woman who can be indifferent now must be without soul or brain, without mind to comprehend or care. Such a one is to be shunned as a leper, even more than a leper; they are to be shunned as the outpouring of creation's scum, fit for nothing, fit not even for fertilizing the fields. Apathy, indifference, has killed all that was good and true in them—mind, soul, sensibility, even sense.

Of all creation you stand alone if you are indifferent now.

## GREAT INCREASE IN SOUTH'S PEANUT CROP AS ANOTHER SUBSTANTIAL CONTRIBUTION TO THE NATION'S FOOD SUPPLY.

**T**ENTATIVE estimates of the acreage planted in peanuts in 1917 and 1918 have been published in the Monthly Crop Report for June, issued by the Bureau of Crop Estimates, Department of Agriculture. The Census of 1909 showed that 869,887 acres were used for growing peanuts. The preliminary estimate for 1916 was 1,245,000 acres devoted to peanut culture and for 1917 2,001,000 acres. This showed an increase in peanut acreage in 1916 over 1909 of 43.1 per cent., while the 1917 acreage is more than 60 per cent. larger than that estimated for last year.

By adding 60 per cent. more land in one year to the raising of a food crop the South gives another illustration, along with its early vegetable and fruit crops and enormous food value of its cottonseed output, that it does not wholly merit the unjust criticism that has been made regarding its right to buy foodstuffs outside.

In 1909 the total production of peanuts is reported to have been 19,415,816 bushels, equivalent to 22.3 bushels per acre. At this rate the Southern States will probably add to the food supply of the nation over 44,600,000 bushels of peanuts, and a large proportion will go into oil.

The Bureau of Crop Estimates reports that it is difficult to estimate accurately the production of this crop, because large quantities of peanuts are grown on land with other crops, and in some sections the crop is not harvested for the nut, but used as a forage.

The accompanying table gives the preliminary estimate of the peanut acreage by States:

State.	Planted in Peanuts—		
	1917 (acres).	1916 (acres).	1909 census (acres).
Virginia .....	158,000	150,000	145,213
North Carolina .....	192,000	200,000	195,134
Georgia .....	420,000	190,000	160,317
Florida .....	235,000	188,000	126,150
Alabama .....	268,000	135,000	100,609
Texas .....	600,000	275,000	64,327
Oklahoma .....	14,000	11,000	1,564
South Carolina .....	22,000	16,000	7,596
Tennessee .....	15,000	16,000	18,952
Mississippi .....	25,000	16,000	13,997
Louisiana .....	35,000	33,000	25,020
All other .....	17,000	15,000	816
Total .....	2,001,000	1,245,000	869,887

Texas increased its peanut acreage this year by 325,000 acres, or about 120 per cent., followed by Georgia, with an increase of 230,000 acres, or about 121 per cent.; Alabama, with 133,000 acres, shows a gain of 98 per cent. Only two States, North Carolina, which is estimated to have utilized 200,000 acres for the cultivation of peanuts in 1916 and but 192,000 this year, and Tennessee, which dropped from 16,000 acres in 1916 to 15,000 in 1917, have a smaller number of acres in peanuts this year than last.



# CONSTRUCTION WORK SHOULD BE PUSHED AND MANUFACTURING PLANTS ENLARGED DESPITE PRESENT CONDITIONS.

WE are in receipt of a letter from a paper manufacturing concern which writes that it has decided not to make expected enlargements at present because of the high cost of paper-making machinery, which, this company writes, would inflate its producing cost, and to this it adds: "As soon as things become a little more normal we expect to take this matter up."

This letter brings up a question which demands the thoughtful attention of every business man in the country.

Shall we go ahead on construction activities, on the establishment of new plants, the enlargement of existing plants, the building of roads and the making of other municipal improvements in this period of high prices?

The answer of the MANUFACTURERS RECORD is emphatically "Yes."

We say this fully realizing how great is the cost of construction work as compared with anti-war prices, and also recognizing the added investment in the plant or in road or other work constructed at present prices. Nevertheless, in the light of the history of the past and of all the light that can be thrown upon the present situation, we can see no possibility of a decline in prices of raw materials or of labor for years to come.

So long as the war lasts—and we believe that this will continue as a minimum for two years—every power of the country must be centered upon production of manufactures and of foodstuffs. Labor prices during that period will necessarily be high, and the demand for the product of the farm and the factory will be so great that staple foodstuffs, cotton, iron, steel, lumber, chemicals, paper and other products will continue high, and he who is looking for what our correspondent calls "normal" times will have to look far beyond the ending of the war, for even that will not bring lower prices.

High prices have continued for some years after all great wars, and if such had not been the case in the past, it would be true after the present war. When this war is over all Europe will be practically on a starvation basis, and it will take several years to fill up the vacuum, in feeding the people and in accumulating some reserve stock. There is, therefore, no possibility of any serious decline in the cost of foodstuffs during the war nor for several years after the war.

When the war is over this country will have to practically reconstruct its entire railroad system to the extent of rebuilding or enlargement of its transportation facilities to such a degree as to meet the pressing problem of the times, when business is far ahead of transportation. Not only shall we have to build and rebuild railroads on an enormous scale to supply our own needs, but we shall have to help to rebuild the railroads of all of Europe, including Great Britain, France, Belgium, Italy, Russia, and perhaps even of Germany and Austria. It might almost be said that the world will have to be rebuilt when the war is over, and this means an almost unprecedented demand for iron and steel and lumber and cotton and other things.

We do not believe it is at all wise, therefore, to look forward to the possibility of getting machinery or doing construction work at a materially lower cost during the next five or six years than at present. Even if there should be some depression in prices, and many prices especially of iron and steel and coal are too high, the time lost by the delay of putting off work of expansion and construction until a period of depression comes would result in losing the opportunity for the expansion of business if present activities continue.

We know of a number of important enterprises projected before the war, but which were not built because of the high prices shortly after the beginning of the war. The projectors of these enterprises took the same ground as the paper machinery company from which we have quoted and said that it would be folly to build new coke ovens or

new steel plants at the high cost of labor and of material then existing. Had these plants been built at that time they would have already very nearly, if not quite, operating under the present high prices of their products, paid the entire cost of construction.

## LET US LOOK FOOD SITUATION SQUARELY IN FACE.

THE MANUFACTURERS RECORD has been trying since early last fall to intelligently and truthfully present to the public the facts in regard to the food question. We were doing this at the time when Washington was sending forth optimistic statements indicating that we were abundantly able to feed ourselves.

The American Steel & Wire Co., in its bulletin on June 16, calls attention to this effort on the part of Washington and of many State authorities to fool ourselves, and on this subject says:

At the same time the President is warning and beseeching everyone to conserve resources to increase the production of foodstuff for ourselves and Allies, there is the smug gentry saying, "Everything is all right; prospects in my State were never better; everything is fine." And Washington, not to be outdone, sends out, "Our experts advise us the harvest is assured." Manufactured optimism. What for? Why lie to ourselves? The harvest is not assured until the grain is in the bin, the hay in the mow.

Things are not all right. When Kansas loses 5,000,000 acres of wheat, it is a severe blow. When pastures come on slowly and thousands of milch cows are sent to the butcher's block, it is a severe blow. When the weather does not supply the required number of heat units, rays of sunlight, it is bad for corn and cotton and other crops.

This is the moment to look things squarely in the face; stop fooling ourselves; know the worst and be governed accordingly.

The winter of 1917 will tax the endurance of the common man. If we do what is right and honorable—and we shall—poor and well-to-do alike will feel the pinch.

It is time to look the matter squarely in the face and not be fooled nor attempt to fool the public. At least one-half the people of the United States are today laboring under the impression that there is no actual food shortage, and that high prices are simply due to the unscrupulous efforts of those who would corner food products.

The writer has made a business of trying to sound out people in all stations of life as to their knowledge of the food situation, and the amazing ignorance as to the facts seems almost incomprehensible, for men who ought to be well informed as well as men who do not keep up with world affairs are still living under the impression that there is no particular need for food conservation, and they are going ahead eating as freely as ever and supplying their table with wheat bread and meats as heretofore. This was illustrated a few days ago by the cook in the writer's family, who made the statement that, so far as she could learn from the cooks of her acquaintance, there had not been the slightest change anywhere in lessening the supply of meat or using cornmeal in place of wheat flour. Sometimes more light can be had on a situation by information of this kind than in any other way. It tallies exactly with what the writer has found in trying to talk about the matter with other people. So far as he has been able to learn none of them, rich or poor, has made any material change in lessening the use of wheat bread or of meat because of the food scarcity. Those who have reduced their table have been the poor or people of small means who have been compelled to do so by the inability to buy food at present high prices. But even they have not generally understood the cause of high prices.

It is to be hoped that the statements recently put out by Food Commissioner Hoover will awaken the country to the critical situation. Mr. Hoover is right in asking that this subject should be discussed in every pulpit in the land. To this we would add that it should be taken hold of by every woman's organization in every church and vigorous and aggressive efforts made in a way to arouse other women to the situation. Only in this way can we hope to meet this situation and save our Allies and ourselves from a condition as to the supply of wheat and meat which would prove seriously alarming.

## THE SOLDIERS' SACRIFICE MUST SET THE NATION'S PACE.

FORMER PRESIDENT TAFT has recently expressed the belief that 6,000,000 American soldiers may have to be sent abroad before the war is ended if we do our share in proportion to what Canada has done.

It took the people of this country a long time to realize that it would be necessary to send any soldiers abroad, and then many thought that we would send only a few thousand, merely for the sentimental effect, but as the students of war affairs have more and more grappled with this problem there has been growing up in the country a realization of the fact that we will be compelled to send vast armies, possibly reaching even the 6,000,000 predicted by Mr. Taft, ere we shall be able to save ourselves and the world from the destructive spirit of Germany.

From the beginning we have taken the position that it would be necessary for this country to put into the war more men than the North and South used in the Civil War, or, largely, more than 3,000,000; that the loss in life would probably exceed the total loss of the Civil War, and that the cost in money would run so far beyond the aggregate cost of the Civil War that the figures which tell the story of that cost will seem triflingly small compared with those which in the future will have to tell the tale of the money that must be poured into the maintenance of our civilization.

We should not count the money; that is the cheapest thing to be had, even though it took a long time to get our people to understand their duty in subscribing to the Liberty Loan. Many other loans will have to follow, and we will be compelled to invest in other loans aggregating vastly more than the Liberty Loan.

As we face the realities and realize the great number of men that must be sent to the battlefields and the losses that are sure to come, touching perhaps nearly every family in the nation, we naturally stand appalled at the magnitude of the task. There is, however, one heroic side worthy of consideration. The men who are going out to do battle are displaying a spirit of self-sacrifice, of self-renunciation, a spirit of service to mankind, which lifts the thought of the whole nation above the sordid and the material into the higher realm of human thinking. No man in this country can henceforth be self-centered or absorbed in the petty things of life—in money-making or in other materialities—without having utterly failed to comprehend the significance of the period in which he is living. When we think of the millions of young men who are offering themselves as the price for human liberty, realizing as they fully do what this war means to them and how great the dangers they face, the nation should come into a new position of larger things; it should think on broader lines than ever before; it should consecrate and dedicate itself, as no other nation has ever been consecrated and dedicated, to the task that is before us and to its meaning in reshaping and remolding our lives. He must, indeed, be a dullard, or his soul be too sordid for any high and holy thought, who for one moment expects to live his accustomed life, who tries to see how much he can make and keep, when every man in this country should see how much he can make in order to give it with a spirit which he never knew before. It is hardly comprehensible that any man should expect, in this hour of world agony, when millions of people are offering their lives on the altar of the nation's life, to make this time of business activity a time for the sordid accumulation of personal profits, instead of using the profits that he may make for assisting the Government and all of the philanthropic activities of the Red Cross and the Young Men's Christian Association and others in the work of carrying on the war and of saving the millions of people who are dying for lack of food.

As the soldier offers his life, so must every other man offer the sacrifice of his work, his time, his money, for what are these when weighed against life itself?

## GOOD ROADS MUST BE BUILT TO HELP SOLVE TRANSPORTATION PROBLEM.

**T**HE absolute necessity of building good roads, even in these times of war, in order to meet the transportation situation has been repeatedly emphasized by the MANUFACTURERS RECORD. Whatever interests it may be necessary to let up on in war times, the country cannot afford to let up on the building of good roads and good streets. To do so would be as great a mistake as it would be to entirely discontinue all railroad expansion or the increase of cars and locomotives. The great pressing problem before the nation from the viewpoint of the producer and the consumer of foodstuffs and of manufactured products, and of the army and navy also, is that of transportation or distribution.

Twenty years ago or more Senator Gorman, in discussing the future of the country, pointed out that distribution was the great problem before the American people. That problem has grown with increasing intensity until today we are face to face with a complete railroad breakdown at a time when vastly increased transportation is a necessity. We have during the last five or six years constantly reiterated that the building of good roads and the use of motor trucks and automobiles was the most important help left to supplement the breakdown of the railroad facilities of the country. Good-roads construction with all possible energy is demanded in this time of war, for we shall need road transportation during the war period and for years afterwards far more acutely than we have needed it in the past.

Railroads of necessity are cutting out many passenger trains. They are unable to haul the freight that is being offered, and the whole business interests of the country are being congested and hampered by inadequate railroad facilities. This is true even now when we have scarcely begun to get ready for war. It will grow with more intensity as the magnitude of war operations increases. It cannot be met in any way except by the building of good roads wherever this can be done, and the fullest utilization of automobiles and motor trucks, though water transportation also must be utilized wherever possible.

The automobile is not any longer a pleasure vehicle when looked at from this standpoint. It is a necessity, vital to the life of the country and to the maintenance of its business operations. Under present conditions it is impossible to increase our railroad facilities rapidly enough to overcome existing conditions, nor can we increase railroad building and railroad cars and locomotives in the next five or ten years rapidly enough to keep up with the demands of the times. We can, however, materially supplement railroad work and help to relieve the congestion by building good roads, solid and substantial enough to stand the heaviest traffic that can be put upon them, and by the fullest utilization of the automobile and the motor truck.

It becomes essentially important, therefore, that towns and counties and States shall fully recognize this situation and see to the building of good roads as rapidly as they can be built, with a full understanding of the fact that this is a war necessity and needed more today than in times of peace. The automobile and the motor truck must do practically all of the short hauling of passengers and of freight, enabling the railroads to a large extent to cut out short hauls on passenger and freight trains alike. More than that, however, the long hauls must be taken care of to some extent by the automobile and the motor truck, and this cannot be done without good roads.

The situation is interestingly stated in a circular issued by the Goodyear Company. The facts which it presents only serve to emphasize the importance of what the MANUFACTURERS RECORD has for years been saying on this question of roads and motor trucks, intensified today by the complete breakdown of the railroad system and of the war situation upon which we have entered. The Goodyear Company in its circular gives the following interesting facts showing how it has found profitable the shipment of goods from the West to New England, with return shipment by motor truck, the trip covering a dis-

tance of over 1500 miles. On this subject the Goodyear Company says:

The unprecedented volume of freight which our common carriers have been suddenly called upon to transport, in some instances involving an excess of 50 per cent. over last year, has been the ill wind that blew the motor-truck industry good. As we view the ever-increasing number of trucks engaged in intercity trade we cannot help realizing that we are witnessing an early stage in the development of new transportation methods in this country.

There are, of course, many limiting factors and progress is of necessity slow and tedious. Of primary importance is the question of roads. It is conservative to say that there are few roads in the United States that are fully adequate to the needs of motor transportation of the future. But motor-truck hauling is here to stay, and these road conditions will gradually be improved to permit new transportation development.

If the present railroad freight congestion had developed five years ago, business would have been helpless. However, all this is changed today. The motor truck has developed side by side with and relieved the railroad in the "short-haul" field. It is really an ally of the railroad, "doing its bit" toward maintaining the equilibrium of the great transportation world.

But only in the "short-haul" field have motor trucks up to this time operated as "feeders" to the railroads. Yet the Goodyear Tire & Rubber Co. has for some time prophesied the establishment of motor transportation lines not confined to short hauls of 25 to 75 miles, but covering routes of hundreds of miles. In fact, not only has the operation of lines maintaining regular schedules, night and day, between cities been visualized, but has actually been transformed into reality.

The Goodyear Company has inaugurated this new era in the transportation world through the establishment of a line operating between its factory at Akron, O., and Boston, Mass., hauling tires to its Eastern branches, and returning laden with cotton fabric from the Goodyear Cotton Mills at Goodyear, Conn., a trip of 1540 miles.

Three round trips have already been made, the last of which was accomplished in seven and one-half days.

The truck used on these pioneer trips is a five-ton Packard of standard motor and chassis fitted with a special body. Behind the driver's seat is a special sleeping compartment, the width of the truck cab, containing a bunk, used by the two truck drivers in relays. It might be supposed that sleeping on a motor truck would be somewhat difficult, but the cushioning qualities of the 38x7 front and 44x10 rear pneumatic cord tires, with which the wheels are fitted, renders the sleeping quarters quite comfortable.

The load-carrying portion of the truck is of stake body, covered with a large tarpaulin bearing a large sign, reading, "Akron-Boston Express." A 44x10 tire carried on the end gate serves both as a spare and an exhibition tire.

The tires used are of the same construction as other Goodyear cord tires, except that they carry a larger number of plies of cord and much additional rubber. They carry a five-ton load with no more damage to the road than that caused by an ordinary touring car. The tire is sufficiently large to cushion the load, absorbing all shocks and distributing the weight over a greatly increased section of it. With the use of these big tires, allowing transportation of heavy loads without damage to the road surface, the opposition to the operation of truck transportation lines, which has been aroused by the pounding and pulverizing action of many solid-tired heavy-duty trucks on the foundations of the roads, will be withdrawn, for it is not the heaviness of the load that breaks up the road surface, but the jolting and pounding and intense vibration caused by lack of proper cushioning.

Now that the Goodyear Company has proven once for all that long hauls by motor trucks, fitted with these big pneumatic cord tires, can be successfully accomplished, it is expected that many other long-distance routes will be established by other concerns, using trucks bearing these tires as equipment.

The Department of Commerce has issued a bulletin setting forth the need for the use of our internal waterways to help to meet the railroad traffic congestion. All that is said in that bulletin as to the importance of water transportation only serves to emphasize the importance of road transportation and use of motor trucks. It is important that every waterway which can be utilized for transportation should be made available and that business men should immediately give attention to the construction of boats available for interior transportation as well as for coast service.

The seriousness of this transportation condition cannot be overstated, and it will grow more and more acute as the months go by.

The Department of Commerce calls upon the country to provide boats of comparatively simple construction and which can be utilized on all the interior waterways. The facts which are given in the Department's statement must receive the earnest consideration of every business man in the country. But these facts and the call for the utilization of interior waterways only serve to emphasize the need

for improving roads and the utilization of motor trucks.

This bulletin of the Department of Commerce, referring to the radical measures being taken by the railroads to help meet the situation, reports that one road has already cancelled 200 passenger trains from its summer schedule, and that another has withdrawn 40 such trains, and special trains for convention traffic are being refused. Yet even with the adoption of methods of this kind the facilities of the railroads are insufficient for the task laid upon them, and the outlook for the future seems certain to make the problem even more serious than it is today. This bulletin quotes a railroad official as saying: "It will be absolutely necessary to use such transportation as there is for essential things. The public should give up the non-essential."

These non-essentials, however, even if given up completely, would not meet the conditions. It will require the utmost exertion of the country for the utilization of interior waterways and for coast traffic, as well as passenger and freight traffic over the improved highways by the automobile and the motor truck, to save the country from a congestion of business which would make it difficult to carry on even the activities of the war.

## DEPORTATION FOR PRO-GERMANS.

**T**HE way to dispose of the pro-German nuisances who are annoying this country and endeavoring to embarrass it in the prosecution of hostilities is to deport them to Germany. To accomplish this may not be so difficult as it seems. Italy has never declared war against Germany; her declaration was only against Austria, and it has been alleged repeatedly, and of late especially, that Germany has been getting American cotton through the port of Genoa. Therefore, it would appear to be simple to round up a cargo of these mouth-fighters and otherwise offensively active enemy aliens, place them on shipboard and dispatch them to Genoa consigned to the Kaiser, who would doubtless welcome them with hearty good-will to replenish his gradually depleting forces. They would then have a real opportunity in the trenches to be of service to the country which they prefer as compared with that of their present domicile, which ought to be highly gratifying to them, judging by their sundry activities in behalf of the forces of autocracy. No doubt they would be delighted to be placed in position to be of physical service to their sovereign, and he would be equally delighted to see them home again. The women could be used—for there are many women who should be deported—for whatever work the German army might decide, and in this very way let these pro-German women do some of the work which Belgian and French women are now forced to do for Germany.

When civil war raged in this country anyone north of the Potomac River who became annoying because of his expressed or otherwise active sympathy with the Confederacy was in danger of being sent south or to prison, and knowledge of this fate in store for them if they became offensive in words or other conduct deterred many a soul from opposing the Federal Government. Therefore, it would, for a starter, be a good thing to load a ship with some of the most noisy pro-Germans, and even with a few of the quiet ones, who are as bitter against the United States as the noisy ones, and convey them to Genoa or some other Italian port consigned to Germany via Switzerland, which would reasonably insure their safe delivery to the Kaiser. If a submarine torpedoed the ship on the way across the Atlantic, or if the tourists arrived safely at their ultimate destination, it would be equally satisfactory to America; in either event they would be where they could do us no harm.

They are in a position similar to that of a traveler who once stopped at a small hotel in a then backward seacoast town of New England, one which has since become famous as a summer resort. He complained to the clerk of the inn concerning the food, the beds, the rooms—in fact, there was nothing in the house that pleased him. When he fin-



ished his tirade of condemnation the old, long-bearded proprietor of the place rose from his easy chair back in a corner and drawled:

"Young man, did anyone ask you to come here?"

"No, I don't know that they did."

"Wal, did anyone ask you to stay here after you came?"

"No, I don't know that they did."

"Wal, they won't!" this latter with an emphatic snap characteristic of a quiet but provoked New Englander, which made it the more expressive.

These enemy aliens are just in that sort of a fix. No one asked them to come here, no one asks them to stay, and, what is more, they not only won't, but they may decide to ship them home again willy-nilly. And perhaps some of our own people, naturalized or native, might be sent with them. Why not? If our own folk were sent South in 1861-65, why could we not send some of these pro-Germans away now?

### CO-OPERATING TO IMPROVE TRANSPORTATION.

A CIRCULAR-LETTER which is being sent out by the Standard Portland Cement Co. of Birmingham to its customers contains such sound advice, not only to those connected with the cement trade, but suggestions which every shipper and consumer should follow, as to how they can individually aid the railroads in relieving the car shortage and freight-congestion situation, that we are printing it in full. It is as follows:

The railroads are insisting that we load to capacity every car they give us, and have even gone so far as to say that if we do not co-operate with them in this matter we cannot expect them to supply us with cars when other shippers are willing to comply with their request.

Because of the great quantity of freight to be moved and a shortage of equipment caused by the requisition for cars by the Government, every inch of box-car space is valuable. When the railroads are extending every resource to move freight, it is not fair or right to ask them to move partly-filled cars. And we are so dependent on the railroads to give the proper kind of service to our customers that we are endeavoring to assist them in every way possible.

Accordingly, at the request of the railroads, we have adopted a rule to load every car to its full capacity; if it is a 60,000-pound car, we shall load in it 170 barrels; if an 80,000 car, from 200 to 230 barrels, depending on the length of the car; if a 100,000-car, 289 barrels. No orders will be accepted for less than capacity shipments.

We regret very much that the present unusual conditions make this practice necessary, and we ask you to adjust your business as we have had to do ours. We know your facilities for handling cement, and we shall keep this in mind at all times. If, for instance, you have placed with us an order for a car of cement, and we know that your warehouse space is limited, we shall endeavor to ship you a 170-barrel car rather than 230 or 289-barrel car. If we know that you can take care of a larger quantity, then we shall plan our shipments accordingly; but as most of the large cars will be used for shipments to contractors and others who have ample facilities for handling large quantities of cement, you need not fear that we shall overburden you with cement.

Another suggestion: Unload your cars promptly. Every hour saved in the release of a car means at least an hour quicker delivery for that car on its next trip. Just as soon as a car is placed at your door or your siding, unload it and then advise your local railroad agent that you release it. The railroad will appreciate this willingness to help them and you will be rewarded by better service from them. Orders have gone out from railroad headquarters that each car must move at least 30 miles each day, and you can see from this what efforts the railroads are making to expedite the moving of freight.

### LARGER STEEL OPERATIONS IN ALABAMA.

THE plans for the enlargement of the operations of the Tennessee Coal, Iron & Railroad Co. of Alabama, a subsidiary of the United States Steel Corporation, for which \$11,000,000 is to be expended, are being pushed as vigorously as possible, and President Crawford of the Tennessee Company hopes soon to be able to make announcement as to the details. The construction of these new plants will change the whole situation in the Alabama district and doubtless materially aid in the development of shipbuilding on the South Atlantic and Gulf coast.

### THE INFLUENCE OF THE STEEL CORPORATIONS ENLARGED OPERATIONS IN ALABAMA.

THE enlargement of the operations of the Steel corporation in Alabama will prove even more important than the purchase by the corporation of the Tennessee company 10 years ago. It will stimulate every industry and give new proofs of the South's iron and steel interests. It is, however, of infinitely greater importance than merely for its local effect or for its influence upon the South. The whole world is scrambling for iron and steel and ships. Civilization is at stake unless the output of iron and steel and ships can be enormously and rapidly increased and with this advance in Alabama to be made by the Steel corporation, the whole South will be stimulated to larger things in shipbuilding and in steel production, to the benefit of our whole country and of the world's civilization.

While Alabama and the South are to be congratulated our country and our allies are also to be congratulated, for every additional ton of steel produced by us and turned into rails, or ships, or guns, or shells, is hastening the day of the death of German autocracy and hastening the day when peace shall once more reign throughout the world.

Every man who now mines the ore or the coal or helps to run the plant whose final output is a ship or a gun or a locomotive or a steel rail is like the man who raises foodstuffs and is doing his bit to save the world from being overrun by barbarism and so viewed from this point all Alabama is now to do a greater part in this work than ever before.

### REASONS WHY GERMANY IS UNBEATEN.

IN an article in the Vancouver (B. C.) Colonist, F. W. Wile, an experienced British newspaper man, who, up to the beginning of the European war, was the Berlin correspondent of the London Daily Mail, sets forth as follows twelve reasons why Germany is not only unbeaten, but, as he sees it, still at its "fighting zenith." His reasons are itemized as follows:

- "1. All the men, women and children in the empire regard themselves as being at war and are conducting themselves accordingly.
- "2. The empire has a Government which governs with no other consideration whatever than that of waging and winning the war.
- "3. The Government leaves absolutely nothing to chance, anticipating contingencies and not temporizing with them after they have arisen.
- "4. The nation's food supply, though disastrously low, has been organized since November, 1914, on a basis which makes 'starvation' impossible.
- "5. Failures in public office—military, naval and civil—are ruthlessly relegated, no matter how high-sounding a name or brilliant a reputation requires to be sacrificed.
- "6. The industrial classes, realizing that their own existence as well as that of Germany is at stake, are working tooth and nail in the national cause.
- "7. Strikes are mercilessly dealt with and broken before they have had time to spread by treating would-be strikers and their leaders as common enemies of the State.
- "8. Despite their failings and disagreeable qualities, as a nation, the German people are thrifty, frugal, highly patriotic and endlessly willing to sacrifice for the Fatherland.
- "9. The German armies, after 34 months of fighting, are still in occupation, with minor exceptions, of the vast territories which their superior preparedness enabled them to conquer and hold.
- "10. The German fleet is still intact, numerically more powerful than ever, capable of risking daring sorties into mined British waters, and is sinking hundreds of thousands of tons of allied and neutral shipping per month.
- "11. German man-power, which rests on a prewar population of roundly 70,000,000, is no nearer 'exhaustion' than the man-power of the United Kingdom, with a prewar population of 46,000,000.
- "12. German statesmanship, eschewing war measures, like the stoppage of racing to save oats, deals with burning necessities, like rationing of breadstuffs. The German Government will not shrink from rationing the air men breathe if it will promote the winning of the war. And it will not wait until the nation has no more breath left before issuing breath-cards."—Atlanta Constitution.

It is because we believe the foregoing statements are fairly accurate that we are convinced the utmost power of our country will be needed to win this war. We shall win it, of course, but not until we have paid a fearful price for our failure to understand the situation two years ago and prepare for

it. We fail to appreciate that Germany, Austria Hungary, Bulgaria, Turkey, Roumania and the captured sections of other countries have an aggregate area of about 1,300,000 square miles and a population of about 150,000,000, while Great Britain, France, Belgium and Italy, not counting their colonies or distant possessions, have an area of about 450,000 square miles and a population of about 120,000,000 people. Russia cannot be fully depended upon, and therefore the brunt of the burden and the fight has been upon Great Britain, France, Belgium and Italy, whose combined area and population are far less than Germany's with her allies and conquered territory. Germany has thus far kept the war entirely outside of her own borders and made the conquered regions of the enemies contribute heavily to her support. We must understand these facts if we would understand our task, and when we understand it properly we will go at it whole-souledly and win.

### THE SOUTH'S INCREASING IRON PROSPERITY.

INDICATIVE in part of the great prosperity of iron companies in the South under existing conditions, and at the same time indicative of the better shape in which the iron-making interests of that section have been put during the last few years under re-organization and re-shaping of management, is the payment by the Alabama Company, the successor to the Alabama Consolidated Coal & Iron Company, of deferred dividends on the preferred stock amounting to 21 per cent. This dividend was declared at a meeting of the directors on Monday last, and is payable on July 18. In the meantime the company has been calling in and paying in advance obligations that would not mature for a year or two, and thus putting itself in a very strong financial shape.

The Sloss-Sheffield Steel & Iron Company, which has an annual capacity of about 500,000 to 600,000 tons of pig iron, and which should several years ago have more thoroughly modernized some of its plants and put them in shape to get the largest possible results, is now doing this work, and under a new president will likely become one of the record-earning iron companies of the country.

Out of the prosperity of the present all of the iron companies of the South should round out and strengthen their operations in every respect and accumulate, as they probably will do, a very large amount of cash surplus available for enlarging their plants in the future. The time is near at hand when the production of steel in the South must of necessity be increased, and this should not be left to the Tennessee Coal, Iron & Railroad Co. and the Gulf States Steel Company. Other companies in the central South must go into the steel business, or, if they do not do so, outside interests should come in and take hold of the opportunity and create great steel-making interests, not only for the profit to be made in the industry, but for protecting the nation and the world in this time of acute steel shortage.

### AMERICA'S BIG MEN SET AN EXAMPLE IN PATRIOTISM.

THE United States Shipping Board has announced the appointment of Alfred Huger of the firm of Huger, Wilber & Guerard of Charleston, S. C., as admiralty counsel of the Board.

This appointment is instanced by the Board as another case where a man of large affairs has put aside his private interests to serve the Government in the present situation. Similar instances are found throughout the various boards and committees engaged in the handling of problems connected with the war. The numerous committees of the Council of National Defense are almost without exception made up of leaders in the special industries affected, and practically all have temporarily severed their connection with outside business affairs to give their time and experience to the Government without compensation.

# Government's War Machine to Be Recast

CONCENTRATION OF BUYING AUTHORITY TO BE PROMOTED.

[Special Correspondence Manufacturers Record.]

Washington, D. C., June 19.

A complete reorganization of the Council of National Defense will be made shortly, under the direction of the President himself.

While recognized as inadequate and unscientific, the recasting of the present war machine of the Government will be hastened by the contest between General Goethals, manager of the Emergency Fleet Corporation, and Chairman Denman of the Federal Shipping Board, over the question of prices to be paid for steel plates for ships.

By the arrangements finally made the new price is basic and will prevail with all steel contracts entered into by the Shipping Board. The final price will be determined in each instance by the raw materials committee of the Council of National Defense. Should this be adjudged higher than the basic price, the steel company will be reimbursed. Conversely, if the raw materials committee judges that the price should be lower, the steel company will be required to make a refund to the Government.

The entire controversy shows the needs of a better system of management in war purchases. The President is personally going over the situation. As the chart now stands, it shows the civilian advisory commission in a dominating position. It is being changed by President Wilson for a better adjustment of relations between all boards and committees and the National Council, the War and Navy Departments and the President himself. As a result, it is expected that a new group of men will dominate the system.

It is probable that when the new chart is formulated power will be concentrated in the hands of a few men—from five to seven—who will be directly responsible to the President and the Council of National Defense, the latter being composed of the Secretaries of War, Navy, Commerce, Labor, Agriculture and Interior.

A correlation of the work of all Allies and the American purchasing departments will be the first aim of the new organization. A central purchasing commission is now under consideration. This will stand next to the Council of National Defense. Those in mind for the head of the department are said to be Bernard M. Baruch, now chairman of the raw materials committee; Frederick W. Allen, formerly in charge of all purchasing for the Simmons Hardware Co., and regarded as the ablest expert now in the service of the Government; Vance McCormick, chairman of the Democratic National Committee; Frank Scott, chairman of the Munitions Board of the Council of National Defense, and Herbert C. Hoover. Should Mr. Hoover be selected, he would still retain direction of food administration. If the commission is to be composed of seven men, Chairman Denman of the Shipping Board and one other member may be added.

The Federal Trade Commission will be brought into the new organization as part of the war machine. A number of contracts have already been submitted to that body for review, particularly by the Navy Department, which has had the Federal Trade Commission look into the prices arbitrarily fixed for oil and coal.

It is understood that Mr. Hoover has given the advice which has been largely responsible for the recasting of the war machinery. That there would be a central purchasing commission has been expected all along, but the extent of its bearing on the whole committee system under the Council of National Defense was not realized. While the reorganization was contemplated before the fight between Denman and Goethals over the price to be paid for steel, this brought the matter to an issue, and doubtless had its effect in determining the wider scope of the new commission.

Naturally, public interest is centered largely in two phases of the new plans of organization. One is that no man shall secure control who demonstrates that the exercise of his own will shall stand in the way of the best interests of the country. The other will involve the obtaining of the materials necessary for the proper and efficient conduct of the war at just prices, permitting a reasonable profit to the manufacturer.

While the former proposition is one about which there may be divergences of opinion, the latter is ob-

viously reducible to a science. In fact, modern cost-accounting systems constitute the methods of arriving at a satisfactory basis on which contracts may be made, and which insure fair dealing to the producer and manufacturer as well as to the Government. Without such a system the widest variations in costs may prevail, with neither the seller nor the buyer in position to determine whether or not justice has been rendered.

It has been through the enforced application of cost-accounting methods that the British Government emerged from its chaos of war contracts to a system of purchases that not only put the whole purchasing branch of the Government in order, but advanced efficiency, lowered costs and vastly increased the rate and amount of production.

Already the instrumentalities for simplifying cost accounting in Government contracts here are to be found in a new division which has been established in the Bureau of Foreign and Domestic Commerce. This division will take over the line of work initiated by the Federal Trade Commission. While its functions will be purely advisory, it will stand ready to assist all departments of the Government which have important contracts to let, but which are not prepared to investigate the cost of manufacturing the articles they propose to purchase.

It is probable that the new division will eventually extend its operations to all phases of industrial production, at least in an educational way. For the present,

however, its object is to protect the Government in its purchases and to save trouble and expense to the manufacturers in arranging for the more important contracts. In the prosecution of this aim it will instruct the manufacturing groups how the classification of their costs should be stated. This, it is stated, will reduce mistakes to a minimum and will also decrease the work laid upon the Government in checking the correctness of bills rendered by the manufacturers.

The whole revision of organization contemplates the unifying of prices. It is recognized that conditions such as cropped up in the steel-plate contracts should not be permitted to occur again.

Even under the present organization, general understandings with supply groups have brought excellent results. While no formal announcement has been made of hide purchases, it is understood that a conference between the leading packers and the committee on raw materials has disclosed the ability of the former to furnish the enormous supplies of hides needed for the army.

At the conference each representative wrote on a slip of paper the amount of hides he could furnish and at what price. From these figures an average was struck, and prices were agreed upon for a contract totaling approximately \$18,000,000.

This method probably saved the Government something like \$7,000,000, it having been estimated that entrance into the open market would have caused a jump in prices that would have made the total purchase cost in the neighborhood of \$25,000,000. Incidentally, the success attending the conference assures the filling of the recently-awarded contract for 4,500,000 pairs of shoes for the soldiers, as well as a plentiful supply of leather for saddles, harness and other similar requirements of the military forces.

## The Rivalry in the Shipping Board

[Special Correspondence Manufacturers Record.]

Washington, D. C., June 19.

The controversy in Shipping Board circles over the price for steel plates for ships resulted in a complete victory for Chairman William Denman of the Federal Shipping Board over General Goethals, manager of the Emergency Fleet Corporation.

This followed the refusal of Chairman Denman to approve ship contracts based on a tentative agreement of General Goethals with the steel manufacturers for steel at \$95 a ton, and the later approval yesterday by Denman of the contract for steel steamers at \$56.20 per ton.

Before the adjustment of the differences was effected both Chairman Denman and General Goethals reached the point where they proposed to have the matter out with the Chief Executive as to which was in control. Chairman Denman saw President Wilson yesterday afternoon. After the conference with Denman had been arranged General Goethals called up the White House by telephone and insisted on seeing the Chief Executive. His request was referred to President Wilson, who announced that his calendar for the day was filled. The contracts at \$56.20 a ton go to the Downey Construction Co. of New York.

This final phase of the situation implies a temporary quieting at least of the controversy between the chairman of the Shipping Board and the head of the Emergency Fleet Corporation. It is known that President Wilson deprecates the friction that has prevailed between the two for some time. While friends of the President have predicted that he would eventually delegate the exclusive authority over shipbuilding to General Goethals, which the latter has virtually demanded, Secretary of the Navy Daniels has supported Chairman Denman in his efforts to get steel at the prices paid by the Navy instead of the figure agreed to by Goethals.

In the earlier stages of the differences General Goethals declared that the price would be left to the committee on raw materials of the Council of National Defense and that contracts would be let with the understanding that prices determined on by that committee would govern present prices as well. To this Denman declared that the committee would act merely in an advisory capacity.

In his earlier challenge to the price agreed to by Goethals, Denman said: "I shall sign no contracts at the figure of \$95 a ton for steel when the navy is getting steel at \$30 a ton less."

Speaking of the relation of the raw materials committee to the contract prices, Chairman Denman continued:

"I feel that we would embarrass the committee if we were to embody in contracts let now General Goethals' tentative agreement with the steel men for \$95 a ton, because in so doing we would give respectability to a price which on its face is absurd for the Government to contemplate."

The contracts yesterday included ten more steel merchant ships, complete, and 24 additional wooden hulls. The vessels will be delivered in 1918.

### We Are Beginning to See.

Every energy of the nation is now being quickened by a realization of the fact that we are at war. And this is a war to the hilt—a war to the death—a war in which murder and rapine and every foul crime that ever stained mankind's history will be brought into play by Germany. We must think in terms of war—we must realize it's full meaning and recognize the desperate reality of the struggle and then we shall throw into the fight the utmost potentiality of our man and woman and money power—and then we shall win over all the powers of the evil one now rampant in Germany. We have undertaken the mightiest task in human history.

### New Southern Shipyard News This Week.

Contracts have been awarded for most of the construction and machinery required for the Baltimore (Md.) Dry Docks & Ship Building Co.'s additional shipyards, recently noted as planned at a cost of \$2,000,000. The Belmont Iron Works of Philadelphia has contract for constructing steel buildings and accompanying work,



and other contracts will soon be awarded. Tools will be furnished by Hilles & Jones of Wilmington, Del.; Cleveland (Ohio) Punch & Shear Works; Manning, Maxwell & Moore of New York, and the Niles-Bement-Pond Company, also of New York. Air compressors will be furnished by the Ingersoll-Rand Company of New York, and two locomotive cranes by the Industrial Works of Bay City, Mich. Day & Zimmerman of Philadelphia are the engineers for the shipyard additions, and Otto G. Simonson of Baltimore will prepare plans for constructing office buildings and storehouses. It is expected that the new plant will be entirely completed by next December. The company is understood to contemplate constructing four or five ship-building berths up to 600 feet long and of 15,000 feet gross tonnage, with future plans contemplating the construction of drydock facilities to include a floating drydock and the building of a railroad tunnel to connect the present plant with the new yard.

The L. N. Dantzer Lumber Co., Moss Point, Miss., recently mentioned as to build shipyards, has selected a site at Griffins Point, on the east bank of the East Pascagoula River,  $6\frac{1}{2}$  miles north and one-half mile south of the confluence of the East Pascagoula and Escatawpa rivers. This site is an elevated plateau 15 feet above the river level, and the plant will have initial facilities for constructing wooden ships of 1250 to 1500 tons for the company's own use. From 200 to 300 skilled mechanics will be employed at the start. The shipyard site is less than a mile from the big Dantzer lumber mills, to which it will also be connected by railway.

Henry Piaggio, with shipyards at Gulfport, Miss., and Orange, Tex., will construct a shipbuilding plant on the east bank of the East Pascagoula River one-half mile north of the river mouth and one mile south of the Louisville & Nashville Railway, near Pascagoula, Miss. No further details are now available. It is reported that Mr. Piaggio will expend more than \$1,000,000 for the first five ships he will build, and that 500 men will be employed in their construction.

Capt. J. F. Cushman of Philadelphia has been investigating Jacksonville, Fla., with a view to establishing shipyards for the construction of seagoing vessels.

E. L. Bloxom, Newport News, Va., plans to construct a marine railway and a boat-repairing station.

Facilities for the construction of large steel ships are proposed for the plant of the Valk & Murdoch Company, on Cooper River at Charleston, S. C. The improvements will include a 6000-ton floating drydock, and it is understood that the company is about to receive contract to build a number of steel ships for the Government. The Valk & Murdoch plant has sufficient river frontage for building four 6000-ton ships at one time, and the company is now applying to the municipal authorities for certain privileges enabling it to proceed with its plans for the betterments. These improvements are conditional upon certain action, by municipal officials, providing for the closing of streets.

Shipyards will be established at Palatka, Fla., by the N. T. Hageman Company of New York, which has obtained Government contract for building a number of vessels. Wooden ships will be built at first, and it is understood that the company plans the location of permanent facilities for both wooden and steel vessels.

One hundred acres will be utilized for a wooden shipbuilding plant which the Pan-American Trading Co., B. N. Garrett, president, Houston, Tex., will build on the Houston Ship Channel. This company owns 5350 acres with a water frontage of  $4\frac{1}{2}$  miles, and it is now driving piles, installing sawmill, etc. It will provide initial facilities for building two ships at one time, and will increase this plant to six vessels. These vessels will be built in accordance with United States Government specifications, but for private ownership for service from Houston to Atlantic ports of North and South America.

W. H. Garland, president of the International Navigation Co., Wilmington, Del., and New York, is reported planning to build shipyards at Wilmington, N. C. The company wires (from Wilmington, N. C.) as follows: "Estimated cost plant, \$6,000,000; this includes steel rolling mills; character of construction for vessels, steel, cement and wood; 3000-ton wooden vessels; 5000 to 10,000-ton steel vessels."

United States Secretary of Agriculture reports that crops produced on reclaimed land in 1916 were valued at \$33,000,000; in 1915 at \$18,000,000.

## BUILDING OF WOODEN SHIPS.

### How to Give the Industry a Tremendous Impetus.

Writing to the MANUFACTURERS RECORD in regard to wooden shipbuilding matters, a business man makes the following interesting statement:

*Editor Manufacturers Record:*

The June 14, 1917, number of the MANUFACTURERS RECORD contains some wonderfully illuminating articles on the Emergency Fleet situation and puts the blame squarely where it belongs. It is astonishing that such a condition of dictatorship should be permitted. There is small gain to be had in dethroning czars abroad and enthroning them at home.

Turning on the light as the MANUFACTURERS RECORD has done will help matters wonderfully, and it might be still more helpful if it were made perfectly plain that there are only two things holding back the building of wooden ships, and these two obstacles are evidently purposely erected against the wooden-ship program. The first is the form of contract that is now being insisted upon.

There are three possible forms of contract:

- (a) Cost plus percentage.
- (b) Cost plus a fixed fee.
- (c) Lump sum bid.

(a) The cost plus percentage form of contract has been objected to because it encourages the contractor to allow the costs to run high, since his allowance, or profit, is increased in direct ratio to that of the cost of the ship. This is a vital and valid objection.

(b) The cost plus a fixed fee form of contract has no such weak point, because no matter what the cost of the ship may be, the contractor's compensation does not change. It is fixed when the contract is signed, and the only personal interest the contractor can have is to get the work done as quickly as possible, so that he may receive his fee. He could have no other personal interest. This is undoubtedly the best form of contract ever devised for conditions like the present, and because it is eminently fair to both sides it is used a great deal throughout the business world. As a matter of fact, General Goethals himself is employed on that kind of a basis. The Government finances his office expenses and pays him a fixed fee or salary. His compensation does not depend upon the varying market conditions. If this is a good form of contract for the Government to enter into with General Goethals, it is equally good for the Government to enter into such a contract with shipbuilding companies and individuals offering their services with quite as patriotic motives as those which actuate General Goethals. It is the one form of contract that will enable the Government to get the greatest number of ships within a given period of time, and at minimum cost.

(c) The lump sum bid form of contract which General Goethals is insisting upon is not fair to any contractor who is willing to build ships for a moderate compensation. It is the most expensive form of contract for the Government, because a bidder under present conditions will add to his figures not only a reasonable percentage of profit which would probably be granted on a fee that would be allowed under the "b" form of contract, but he would also add a liberal figure to take care of all possible contingencies and to insure his receiving the percentage of profit which he has included. This he adds in the way of insurance. This is a bonus which the Government pays for that form of contract, and for which it gets no adequate return. For example: The cost of the 3000-ton Ferris type wooden ship is about \$425,000. The fee proposed by the first form of shipbuilding board contract was \$40,000, making a total cost to the Government of about \$465,000.

The same ship figured on a lump sum plan would cost the Government about \$495,000. I understand that some contracts have been let at about that figure. This form of contract eliminates a large number of shipbuilding companies that, although well equipped and organized for a work of this kind, have not the capital to carry the deferred payment which they would have to carry under this form of contract.

It means that the Government is really paying a large bonus to companies who can finance this form of contract.

The second obstacle is the type of wooden ship insisted upon by General Goethals, viz., the Ferris ship.

Unless it is for the specific purpose of blocking the

wooden-ship program, why should a ship having all the refinements of a millionaire's yacht, including tiled bathrooms, be insisted upon, although at a great sacrifice to the Government of time and money. General Goethals says he has allowed a few Hough ships built on the Pacific coast because there they will be under the personal direction of Mr. Hough, but that he cannot allow them to be built elsewhere.

This is a singular circumstance. The Hough plans have been approved by Mr. Ferris and by the American Bureau of Shipping, and because of their simplicity the use of them is urged by Mr. Hough, who would tell Mr. Goethals that anyone who is competent to build a Ferris ship could build two Hough ships in the same time. Mr. Hough's personal supervision is not at all necessary, and it is evident that Mr. Goethals is withholding his real reason, if he has any, for refusing to allow Hough ships to be built on the Atlantic coast.

If these two obstacles are removed there will be a tremendous impetus given to shipbuilding.

### Lack of Transportation Lessens Supply of Southern Timber for New England Shipyards.

Madison, Wis., June 15—[Special.]—A. K. Armstrong of the United States Forest Laboratory has returned to Madison from a five weeks' trip through Maine, Massachusetts, Connecticut, Georgia and Florida, where he visited the shipyards of these States. The visit was made primarily to determine the status of timber in the shipbuilding industry, the idea being to determine what woods were used in particular parts of ship construction, with special reference as to whether substitute species of wood might be needed. Mr. Armstrong found a dullness in the shipbuilding industry of the New England States compared with what it has been, though a great revival is now in prospect. He declares that at one time there were 35 yards in operation at Bath, Me., while now there are only three. He saw only 15 ships in process of construction in Maine during his visit in that State.

Mr. Armstrong found that there is a tendency in the New England States to use more and more Douglas fir, because the cost of transportation of Southern woods has gone up so tremendously during the war. It is costing \$20 a thousand to ship timber from Gulf ports to Maine by water, and it is difficult to get rail shipments at all. Mr. Armstrong says that some firms that ordered from Gulf ports in August have not received their entire shipments yet.

Mr. Armstrong found that there is a shortage of certain species of timber used for special purposes; for instance, locust trunnels, knees, etc. This appears to be a minor matter, but nevertheless it involves the question whether a substitute wood can be found or whether iron must be used.

### Lumber Deliveries for Ships and Cantonments.

Advises received by the Southern Pine Emergency Bureau, New Orleans, from Washington are that contracts for lumber for ships and cantonments are now being officially awarded by the Government, and the bureau is making preparations for the handling of a large amount of business during the next few weeks.

The Government has let it be known that it will expect the quickest possible deliveries for all materials, and the facilities of mills and railroads will be taxed to the utmost.

It is reliably reported that each shipyard is planning to build from three to six boats simultaneously, and they want the material for each boat to arrive at the same time in the following order: Keels, framing, planking, decking and interior stuff. Several ship contractors are in communication with the bureau in regard to mills which will be assigned to saw their schedules.

Two shipments aggregating 500,000 feet have been sent to Fort Riley, Kans., in addition to the original Fort Riley order, which was for 6,200,000 feet.

An additional 300,000 feet was also sent to Leon Springs, Tex., supplementing the first 1,700,000-foot order delivered some days ago.

Sheep are now selling in Australia at \$38 a head, four times normal price.

# GREATEST CONSTRUCTION WORK EVER UNDERTAKEN

THE NATIONAL GOVERNMENT TO BUILD, IN THREE OR FOUR MONTHS, SIXTEEN CITIES, EACH TO HOUSE 40,000 MEN, WITH ADEQUATE WAREHOUSES, ICE FACTORIES, WATER-WORKS, SEWAGE PLANTS, AND OTHER IMPROVEMENTS.

At an expenditure estimated to aggregate possibly \$40,000,000, the Government is undertaking to build 16 cities to house 40,000 people each and have all of them ready by fall. It is estimated that over \$2,000,000 a month will be paid out at each of these army cities.

Cantonment sites in the South, where will be stationed hundreds of thousands of men in training for the National Army, have been selected at Columbia, S. C.; Atlanta, Ga.; Petersburg, Va.; Annapolis Junction (Admiral), Md.; Louisville, Ky.; Little Rock, Ark., and Fort Sam Houston (San Antonio), Tex., and in addition separate camp sites have been selected for the National Guard at Fort Worth, Waco and Houston, Tex.

Contracts for two of the Southern cantonments have been awarded—Columbia, S. C., and Atlanta, Ga.—the former to the Hardaway Construction Co. of Columbus, Ga., and the latter to the Arthur Tufts Company of Atlanta. Altogether five contracts have been accepted for the five army cantonments out of the sixteen to be established in the country. Those outside of the South are: Ayer, Mass., F. J. Ley & Co. of Springfield; Wrightsville, N. J., Irwin & Leighton of Philadelphia, and American Lake, Wash., Hurley-Mason Company of Tacoma.

Every resource of the Quartermaster's Department, which has charge of this work, is being strained, and to supplement and advise the Quartermaster's Department the Council of National Defense has appointed an Emergency Construction Committee.

Some idea of the magnitude of the task of organization and establishment of these cantonments are given in a comprehensive outline of the work by the Committee on Public Information, which contains, in part, the following:

With our 500,000 new recruits for the National Army there will be officers and extra men enough to make a body of over 600,000, to be divided into groups of 40,000 each. That means that we must have ready for our Army 16 cantonments or towns where these men are to be trained. Paramount considerations in determining the selection of a good location are:

1. Its accessibility by rail. The cantonment must be easily reached through adequate main line facilities, so that building materials and supplies may be carried in before and during the course of construction. After completion of the cantonment these same rail facilities are necessary, that troops may be brought there for training and taken away again for service when the training period is ended.

2. Assurance of an abundant supply of pure water. Some authorities estimate that a safe supply of at least 2,000,000 gallons a day is absolutely essential.

3. Proximity to some center of population.

4. Assurance of good roads, making for easy access to and from the community nearest at hand.

5. General healthfulness. The cantonment must lie on reasonably high ground, the site being well drained, with no standing or stagnant water.

6. Size. The site must be large enough to assure sufficient room for the many buildings and grounds required.

7. Topography.

The site determined upon, the next step is for a sanitary engineer, a town planner and an officer representing the commanding general to meet on the ground, where they will inspect the location, look into its possibilities, estimate its difficulties, and then proceed to have a survey made into the quickest way possible, calling upon local engineers for assistance and asking for volunteers from railroad engineering corps.

Areas of the cantonments will vary with the topography, the minimum being from 1500 to 2000 acres. In addition to the city itself, parade grounds, maneuvering space and rifle ranges must be provided.

To supply almost instantly the materials for even one of the military cities, having about the same population as Augusta, Ga.; Galveston, Tex., or Montgomery, Ala., or cities of similar size, puts a heavy strain on the producing and shipping facilities of the country. They are not only to have ample water supply and the best of sewerage, but they must have also

streets, a railroad, barracks for the men and quarters for the officers. The typical company barracks will be a two-story structure built of wooden frame, covered with matched boards. The roofs will be covered with prepared roofing. They will be well ventilated with flues, lighted by electricity, heated in the North by steam and in the South by stoves. Each will have a kitchen and mess hall.

Four thousand carloads of material for each cantonment will be required, over 1300 carloads of lumber, or about 26,000,000 feet, being the big item.

Roofing nails alone will fill one freight car.

Crushed stone for the roads will make 812 carloads. Here are some of the other items:

Twenty-eight thousand squares of roofing, 60 cars. Twenty carloads nails and hardware.

Twenty carloads plumbing.

One hundred and ninety-two carloads of tanks, heaters, stoves, ranges, piping, electrical materials, refrigerators, and the like; railroad materials for five miles of tract, divided into 30 carloads of ties and other timber.

Twenty carloads of spikes, rails, fish plates, etc., and 114 carloads of ballast.

Ten carloads of electric-light poles, wires, insulators, etc.

Materials for 12,000 cubic yards of concrete will take 70 carloads of cement, 350 carloads of stone and 175 carloads of sand.

The men of the cantonments will sleep in double-deck bunks. This means there will be 37,000 separate bunks, each with its mattress. To transport the mattresses 125 cars will be required, and the bunks will take 62 more.

Water and sewer lines will make 65 carloads each, and 150 carloads of hospital equipment will be necessary.

Three carloads of screens are also included in the estimate, as are 20 carloads of construction tools.

The Emergency Construction Committee of the General Munitions Board of the Council of National Defense describes the fee system of the contracts determined upon for the building of the new army cantonments. The fees vary from 10 per cent. on small contracts of \$100,000 or less to 6 per cent. on contracts of more than \$3,500,000, with an upset limit of \$250,000.

The fees in all cases cover both profit and overhead expenses.

"The profit system has been decided upon," says the Emergency Construction Committee of the Council of National Defense, "only after weeks of study to find a basis for the fees which would assure the country of the highest grade of work from the contractors and at the same time prevent extravagance and waste through the payment of excessive profits. It is a great pleasure to pay tribute to the loyalty and patriotism of the great majority of contractors who have come here to discuss the question with us. With a few exceptions, they have acquiesced willingly in our contention that the profits must be kept down to the lowest level consistent with high-grade work. Some firms have offered to do the work on a cost basis, but we have considered this an unwise policy, both economically and nationally. The utmost speed and efficiency must be developed in these and future building jobs for the Government, and the acceptance of offers of free service might easily disrupt the organization of the high-grade contracting firms best qualified to do the work effectively."

The most interesting features of the form of contract are those governing the financial relations between the Government and the contractor. The latter is to be paid his expenses and a percentage of their total amount, out of which he must meet his overhead costs. The contractor's profit will come in the difference between this percentage and overhead expenses.

The Government promises to reimburse the contractor on the following items, for which he makes an outlay:

1. All labor, materials and machinery necessary for the work. No departure from the standard rate of wages in the locality may be made without the consent of the Government's representatives.

2. All subcontracts.

3. Rental for construction equipment hired or owned by the contractor, at rates fixed in detail on the contract. The rates may be judged from the daily rental of \$5 permitted for the use of an automobile.

4. Transporting, setting up and dismantling such equipment.

5. Transportation of field forces engaged in the work.

6. Salaries of resident engineers, superintendents, timekeepers, foremen or other men in the contractor's field office.

7. Buildings, field office supplies, equipment, commissary department and hospital expenses required during construction.

8. Insurance and bonding expenses, uninsured losses and expenses incident to the work and approved by the Government's representatives.

9. Fees, deposits, royalties and similar necessary expenses.

10. Transportation, traveling and hotel expenses of contractor's employees actually incurred in the work.

The Government has endeavored to give the maximum amount of flexibility to the contract in order that all low rates accessible to the Government in the matter of materials and other items of expenditures may be utilized. For instance, the Government may pay any or all freight charges incurred in obtaining material and machinery which would tend to reduce the amount on which it must pay a percentage to the contractor. Also, through this arrangement, advantage could be taken of the specially low rates which the Government obtains from land-grant railroads.

Freight charges on hauls over 500 miles must be specially approved in every case by the Government's representative. The title to all work in progress or completed is in the United States, and all materials and machinery for which the contractor is to be paid, under Clause 1 of the preceding classification of expenses, belong to the United States as soon as accepted in writing by its representative.

The contractor is to furnish a bond for \$250,000.

His profit and overhead expenses must come from an additional payment made by the Government and amounting to 6 per cent. of his expenses as enumerated above in cases where the work costs over \$3,500,000 and running up to 10 per cent. if the total is under \$100,000. The total amount of this percentage payment will in no case be allowed to run over \$250,000, no matter how high the total cost of the work may be.

The value of any construction equipment furnished by the Government is not included as a part of the cost of the work when determining the contractor's percentage, nor any uninsured fire or liability losses which the Government may pay to him under Clause 8, nor any payments by the Government for freight, nor any of his overhead expenses. The contract fixes his compensation on the cost of work done by subcontract at 5 per cent. and on the reconstruction of damaged work not over 7 per cent.

Provision is made for monthly payments for actual expenses approved by the Government's representatives, who have access at all times to the accounts kept by the contractor. This puts the minimum strain on the contractor's financial resources while giving the Government a complete check on the accuracy and propriety of every item before payment is made on it.

The cost of these cities is so great that instead of building 32, the Government has decided to reduce the number to 16. These will be sufficient for the new army. There will also be a number of great temporary camps occupied by the State troops. They will not need permanent cantonments, for the period of training of the State troops will be over before cold weather sets in, and the men can live comfortably in tents during the summer and early fall. Even if the cost of providing cantonments for them was not prohibitive, it would be physically impossible to have the barracks ready for them in time. It will put an enormous strain on the building resources of the country to have the 16 cantonments for the new army ready by September.



# Steel Corporation to Provide Steel for Southern Shipbuilding

By ALBERT M. SMITH, Brunswick, Ga.

No announcement of investment in the South in its history is of such vast import for the future progress and well-being of the South, and, in fact, the entire nation, as that made in the MANUFACTURERS RECORD of last week by Judge E. H. Gary, chairman of the board of directors of the United States Steel Corporation, that the Steel Corporation has authorized President George G. Crawford of the Tennessee Coal, Iron & Railroad Co. to expend \$11,000,000 in improvements to begin at once.

The significance of this announcement is not in the size of the expenditure, but in the fact that the improvements are, according to the best information available in advance of definite announcement of plans adopted for the improvements, for the purpose of extending the facilities of the Tennessee Coal, Iron & Railroad Co. to enable the company to roll plates and shapes of the largest sizes for steel shipbuilding, and in the further fact that the expenditure is probably only the first of large appropriations that will be made for still greater extensions of facilities along the same line. It seems altogether probable that the Steel Corporation will either establish shipbuilding plants on the South Atlantic and Gulf coasts, at ports possessing the greatest advantages of rates and deep water and commodious harbors, or will undertake to foster others in such projects. Recent announcements of formation of companies, with large capital, to engage in construction of steel vessels, at Brunswick, Mobile and Savannah, indicate that there soon will be at least a much greater actual demand for plates and shapes from Southern shipbuilding plants than now exists, and it is a known fact that such plants as the Brunswick Marine Construction Corporation have been negotiating with the Tennessee Coal, Iron & Railroad Co. for the past year on the matter of furnishing steel to them for the construction of steel steamships for which they have contracts. In the case of the company named the first steamship is now under construction of steel plates and shapes rolled in the mills of the Tennessee Coal, Iron & Railroad Co., in the Birmingham district. Announcement has just been made at Brunswick by the United States Maritime Corporation, which has purchased a site of over 125 acres to build a large shipbuilding plant, that they are now placing orders for steel for six steamships.

In the issue of the MANUFACTURERS RECORD of July 13, 1916, the writer of this article gave in detail facts developed by a careful investigation conducted by him that demonstrated that the only obstacle in the way of the rapid growth and development of steel shipbuilding in South Atlantic and Gulf ports was the inability of the Southern steel mills to furnish plates and shapes. The Tennessee Coal, Iron & Railroad Co., the Ingalls Iron Works, and, perhaps, one or two other steel mills in the South were able at that time to furnish a limited tonnage of plates and shapes of small sizes and thickness, the largest size of plates that could be rolled by the Tennessee Company being 72x222 inches, five-eighths inch in thickness. Plants building large vessels, such as standardized tankers, find it necessary and more economical to use plates as large as 90x348 inches, three-quarters inch average thickness. Even the supply of smaller plates and shapes was limited. In the face of such conditions, it was manifestly difficult to develop shipbuilding plants on an extensive scale for building steel vessels. Those shipbuilders who desired to engage in steel shipbuilding were unable to plan extensions as long as uncertainty existed of being able to utilize steel from the Birmingham district on the lowest rates prevailing from any steel-producing center to an ocean port, such as those prevailing from Birmingham to Brunswick, even though the rates from the Pittsburgh district by rail and water remained but little higher to Brunswick than to Newport News or Bath, Maine, or Quincy, Mass.

Under present conditions and those that we may safely assume will continue for many years to come, it properly may be expected that the announced intention to spend \$11,000,000 in the district is only the beginning of a policy of building new plants and making improvements that will result in the development of Bir-

mingham into another Pittsburgh. Also, it is to be hoped that the officials of the Steel Corporation will continue to study the opportunities in the South with increased interest, and that they will not overlook advantages of establishing shipbuilding plants of their own, and perhaps tidewater steel mills, such as are being developed on such a vast scale by the Bethlehem Steel Co. at Sparrows Point, near Baltimore, in those ports in the South which strategically best located with respect of transportation of iron, coal and ore from Birmingham and ore from Eastern Cuba, Venezuela, Newfoundland and Spain, and which possess also the greatest natural facilities in depths of water and harbor areas.

To make the facilities of the steel industry of the South complete, at least one great plant is needed on the coast to use foreign and domestic ores, and for economic reasons a great steel shipbuilding plant should be located with it, each being the necessary complement of the other.

[Knoxville Sentinel.]

## Edmonds' Coup.

The Gary dinners are celebrated in New York, as a rule.

But Birmingham had a Gary dinner Saturday, and it was markedly different from other Gary dinners. The dinner was distinguished with the presence, besides Judge E. H. Gary, of H. C. Frick, George F. Baker, George F. Perkins of New York and Percival Roberts, Jr., of Philadelphia, all big figures in the United States Steel Corporation. And the dinner was featured by Judge Gary's announcement that \$11,000,000 will be appropriated to improvements and extension of the Tennessee Coal, Iron & Railroad works at Fairfield, Ala., "which are intended to furnish in normal times products for the markets naturally supplied from the Birmingham district, and in particular demand at present on account of the necessities of the Government resulting from war conditions."

It was a big day for Birmingham. It was a big day for Tennessee Coal & Iron, and augers doubtless that at last Southern ores are to come into their own. And it must be said that it is a feather in the cap of Richard H. Edmonds, who in the MANUFACTURERS RECORD has been urgent in his recommendation that the Steel Corporation develop its Tennessee Coal & Iron plant with a view to permit it to share in the big business and prosperity which the war demands have precipitated upon these interests in the United States. Whether the move is wholly the logical result of the war situation or in part due to Mr. Edmonds' insistence that the Tennessee Coal & Iron be given this recognition, Mr. Edmonds will reap much credit for his foresight in urging this move.

## NEW \$10,000,000 CORPORATION FOR TENNESSEE.

### New York and Pittsburgh Capital Forming Company to Develop Bon Air Coal, Timber and Iron.

Final arrangements have been completed for developing the Bon Air Coal & Iron Co. properties in Tennessee, a new \$10,000,000 corporation to be organized in accordance with the negotiations which W. J. Cummins has been conducting for himself and associates. The Bon Air Coal & Iron Corporation is the new organization, and its officers will be: President, Alexander R. Peacock, formerly vice-president and general sales manager of the Carnegie Steel Corporation; treasurer and chairman of directors, John McE. Bowman; both of New York; secretary and general manager, A. J. Moreland, previously with the Carnegie Steel Corporation; vice-president and sales manager, W. J. Cummins of Nashville, Tenn. General headquarters will be

established at New York, with Tennessee offices at Nashville.

The properties which will be acquired include: Two iron furnaces at Bon Air, each with daily capacity of 100 tons; 55,000 acres of coal and timber land on the Cumberland Plateau, in the Caney River Fork section; 27,000 acres of virgin timber land in Wayne county; 50,000 acres of brown iron-ore land in Dickson, Hickman and Lewis counties; coal and iron mines, etc. It is the intention to thoroughly develop the properties so that all their resources may be fully utilized. Plans provide for improving the two furnaces, these betterments to include adding two stoves to the six now operated. The Allens Creek coal mines are to be increased to a daily capacity of 200 tons, and new machinery with other accompanying equipment will be installed for the coal mines at Bon Air, Ravenscroft and Eastland. Additional drift mines will be opened on the coal lands with a view to increasing coal production to 10,000 tons daily; the 200 beehive coke ovens will be repaired and operated, and sawmills will be installed to cut the timber for market. The commissary will be enlarged and other provision will be made for additional employees.

## For Increase in Steel Production.

[Nashville Tennessean.]

Since the beginning of the war Richard H. Edmonds, editor of the MANUFACTURERS RECORD, a journal devoted to the industrial development of the South, has repeatedly and in a most public way appealed to Judge Gary, as the official head of the United States Steel Corporation, to endeavor to get that company to increase the productive power of the Tennessee Coal, Iron & Railroad Co., a subsidiary of the United States Steel Corporation. Judge Gary has not been unmindful of these appeals. A number of reasons, however, have existed which have caused him to delay action, one of the main ones being the pendency in the Supreme Court of the suit instituted by the Government for the dissolution of the United States Steel Corporation.

The recent order of that court requiring a reargument of the case, coupled with the tremendous need of the General Government at this time for more iron and steel, caused Mr. Gary and his associate directors to go to Birmingham on Friday last to look over the situation. As the result, improvements aggregating \$11,000,000 in cost were ordered to be made at that point. This action was extremely significant, not only as to purchases of iron and steel during the pendency of the war, but afterwards, giving to all Southern industrial enterprises the opportunity to secure, nearer the point where made and needed, fabricated steel for all purposes. One of the arguments used by Mr. Edmonds in his appeal to Judge Gary was the fact that the vast tonnage of ore now being converted in the North into steel was subject to possible hostile interruption, and the further fact that the Bethlehem Steel Co., which is getting its ore from abroad, was subject to a like interruption, and that it was extremely unwise for the United States not to develop more strongly the steel plants in the interior, far removed from successful hostile interruption.

It is morally certain that not only during the war, but for a period long after its conclusion, enormous quantities of steel will be needed for habilitation, as well as for improvement purposes. Every big additional plant established in the South will cause owners of iron ore and coal deposits to develop them more strongly and increase the South's ability to contribute more largely to the general need of the world for steel and iron.

Iron, which for some time prior to the war and a while after had been dragging along at prices ranging between \$11 and \$15 per ton, is now daily advancing in price, closely bordering, at present, on \$50 per ton, with no one able to say when the price will cease to increase. Now, therefore, is the time for development of mineral deposits, wherever they may exist. Educated young men, having a knowledge of chemistry and mining, and laborers also, accustomed to handle ores and coal, are making a serious mistake in leaving the South, where so many opportunities for acquirement of substantial wealth exist. They allow themselves to be tempted by temporary offers of what appears to be higher pay, leaving out of view the really higher compensation which would soon come to them if they remained in their own rich section of the country and gave it the benefit of their knowledge and strength in the needed development of its deposits of all kinds of valuable minerals.

## A Nominating Speech Yet to Be Made in Behalf of Kaiser Wilhelm

Seated on his throne of flame, with the fumes of burning sulphur as incense, the Ruler of Hell surveyed the mighty throng of kindred spirits. They had been called in from their work throughout all the universe to report on all the evil that they had been able to accomplish or that in their devilish ingenuity they had been able to plan. From the myriads of peopled worlds where Satan's minions had been striving to put into action all of the evil influences upon which, through the unnumbered centuries, they had fed their imagination, came the leaders of Satan's kingdom.

One by one they sought to win the favor of the Ruler of Hell by telling of diabolical deeds, each trying to surpass the other as they told of sins that had never before been heard of even in these infernal regions. As Satan listened to these chosen spirits, with all their hell-born devices to pull down virtue and uplift sin, there crossed his countenance the faint glimmer of a smile in a region where laughter is unknown—the Satanic smile of satisfaction at how well his messengers had learned their lessons and improved on his teachings.

Presently, however, there came one who, despite the effort to suppress him, demanded a full hearing.

"This region," said he, "has too long been ruled by incompetence and mediocrity."

"Through the ages we have been taught that Satan held his position and his power because in all the wide universe there had never been found a demon who could match him in villainy or who could, sometimes in the guise of a saint and sometimes in that of a fiend, work such indescribable horrors upon all of God's creatures."

"We have been told that no other demon in all the universe had the imagination to plan or the power to wreak upon the innocent such sorrow and suffering as Satan."

"We have been told that for devilish ingenuity in devising new sins and new ways of destroying virtue, in tearing down all that is good, and in spreading broadcast through unnumbered worlds unending sin and suffering, Satan had never been matched."

"But though this may all have been true in the past, it is no longer true. The right of rulership by reason of superiority in evil no longer belongs to him who has dominated us."

"I have come from earth, where for nearly three years it has been my mission to study the work of one who has devised more evils and more sin and more sorrow and suffering than any of us have ever before known in all our wide travels from world to world."

"I have found one who outclasses Satan."

"I have found one in comparison with whom as a deviser of evil and sin and the creator of sorrow Satan is but a cheap piker."

"I have brought with me the one who, by reason of his abilities to murder innocent women and children and to cause such outrages upon them that murder itself seems angelic by comparison, and with unmatched hypocrisy claims that he is a copartner with the Almighty in his devilish work, is justly entitled to rule this region."

"Since the beginning of time there has never before been one who gloried in such campaigns of murder and outraging of women and children as he has gloated over."

"Other men have committed these crimes, but in doing so they have shrunk back abashed before even the devils themselves."

"But I have found one who glories in these achievements."

"I have found one who has rejoiced in unspeakable outrages committed by his army upon innocent women; one who has covered the world with voiceless woe; one who has made rape an honor and murder a crown of glory."

"I have found one who has made the name of his people, honored in the past, now a hissing and a by-word, hated by all the world; despised as have been no other people in all human history; a stench in the nostrils of all decent men and women; one who turned his army and navy into cold-blooded murderers and ravishers of women and children, and made them glory in their deeds of evil."

"I have found one who, in times of peace, covered all

the world with his spies; one who, under the guise of friendship, was for years preparing to stab to death everyone who stood between him and his lust of world power; one who has educated his once well-meaning people into active agents to commend his devilish work, even some men and women who professed to be followers of the Son of God."

"I have found one who bought the services of men and women in other lands who sold themselves to try to betray civilization for even less than Judas demanded, and who, like Judas, claimed to be doing good when they knew the rottenness of their own hearts."

"Indeed, I have found one who has planted in every land the Judas fruit of treachery and deceit, even among those who professed to higher things, and who have made even Judas mourn that they outmatched him, since he betrayed his Lord only once, while the Kaiser and his crowd have unceasingly betrayed all humanity."

"I have found one who, by these pre-eminent abilities in outclassing Satan, has a right to assume rulership of Satan's kingdom."

The Satanic smile had faded from the face of the Evil One. At first bitter and relentless hatred possessed him as he listened to one who had dared to suggest a new ruler, and he sent forth his minions to fire with intenser heat the lower depths of the lower hells into which to drive this traitor; but just then the doors of Hell swung wide and Satan saw the spirit of Kaiser Wilhelm enter. Instantly he realized that his rule was at an end. He saw that his vaunted superiority in sin and devilry was as nothing when matched against that of the Kaiser. As he slunk away, he saw escorted to his seat of burning brimstone the one who on earth had outmatched him, and whom he felt was justly entitled to the rulership of his kingdom.

And then as the new ruler took his seat upon the throne of blazing brimstone there appeared in the flames that played around his head a picture of a great ship in whose side there was a gaping hole. Standing in the center of this there appeared Kaiser Wilhelm calling to his demons to bring to him the helpless babies and innocent women. With fieldish glee he caught them and gloatingly fed them to the ravenous sharks below. The onlookers shuddered at the sight, realizing that even Hell had sunk to hitherto unknown depths of depravity.

Suddenly, however, the fiends of the lower world, who for a moment had been dazed by the appearance of the new ruler upon the throne, aroused themselves to this degradation of Hell and determined to rid even that region of one who had so surpassed in devilry all that Hell had ever known. In mad rebellion they rose. With one great convulsion Hell vomited him forth, for even its inhabitants of murderers and thieves, the lewd, the lascivious and all the unrepentant throng could not sink to such depths as to permit him to remain.

### Does the United States Department of Agriculture Really Want to Help Food Consumers? If so, Here Is One Way to do It.

By JOHN T. ASHCRAFT, Secretary, Legislative Committee, Interstate Cottonseed Crushers Association, Washington, D. C.

The South and West earnestly hope that some way may be found to permit a larger use of the wonderful bounty of food oils produced in these great sections.

Assistant Secretary Vrooman of the Department of Agriculture says that on his recent tours he saw much suffering, especially among the poor, because of the crime being perpetrated against the American people by the control of food prices by disloyal food pirates.

One paper quotes the secretary: "Everywhere I have found a growing feeling that there must soon come a reckoning with \* \* \* those sordid, unscrupulous denizens of the business jungle who \* \* \* are intent only upon filling their own pockets with \* \* \* the blood money of hungry men, women and children. \* \* \* I stand in wonder and admiration before the patience and forbearance of the American people."

This is a terrible indictment. The biggest single item of food shortage is in table fats. The most cruel

scramble is for butter. The buttermakers have notified Congress that the supply can't be increased. The Department of Agriculture has notified the world that a large percentage of the butter made is unfit for human food. The South and West produce huge quantities of vegetable and animal oils which, when churned in milk, produce a table fat in every respect as palatable and wholesome as the best butter. This form of table fat must be produced under the strict supervision of the Department of Agriculture. The law requires it to be designated as "oleomargarine." It is all made clean and free from disease. It sells at from one-half to two-thirds the price of butter. Yet it is against the policy of the Department of Agriculture for the name of this food to be so much as mentioned in any of the food advice and economic menus issued by the Department, while almost every page of these instructions reiterate the uses of butter. The butter can't be had at any price. The people are not advised of the uses of oleomargarine or of the fact that it can be had.

Hundreds of millions of pounds of vegetable and animal oils suitable for food goes annually into industrial uses, and likewise other hundreds of millions of pounds of milk in which these oils might be churned into pleasing and wholesome food forms is fed to hogs or poured upon the ground.

The Commissioners of Internal Revenue for years have denounced the law which compels this awful waste as a perpetual invitation and aid to "pretended butter dealers" in committing frauds upon consumers. Mr. Vrooman is very properly indignant at the "blood money of hungry men, women and children." Will he do anything to induce Congress to repeal the unjust law which lays heavy taxes, licenses and other severe restrictions upon the production and distribution of the wholesome table fat made under the supervision of the great department of which he is so conspicuous a part? Will he procure such a change in the policy of the department as will permit the food experts to give the people information concerning the only food prepared solely under the supervision of his department?

Or will he reply, as other high officials replied to a large committee of oil producers recently: "I will not discuss the oleomargarine question." "We must not arouse the enmity of the butter people?"

Will the millions of farmers who produce these food oils, and the hungry millions who need them, continue to be the willing objects of "wonder and admiration for their patience and forbearance," while the "all-powerful butter trust" compels the people to scramble each for some small share of the inadequate (and often filthy and diseased) supply of butter?

Who and where are these "disloyal food pirates that are starving the American poor?"

### To Be Silent Now Is to Be a Traitor.

[The Baptist Standard, Chicago.]

There are thousands of American citizens who would never acquiesce in any technically traitorous act which would give aid and comfort to the enemy who yet deliberately propose for themselves a policy of passive acquiescence in the present instance, and have determined, so far as their public teaching is concerned, to maintain a policy of silence. We declare emphatically that such premeditated silence is unneutral, and, while it does not technically place one under the traitor's ban, it comes dangerously near doing this very thing. To be silent now means that one is unneutral at heart, and one's silence can hardly fail to have a sinister influence upon the acts of others. He that is not for the United States today is against it.

### To Drain 71,000 Acres in Arkansas.

Contract has been awarded to R. H. & G. A. McWilliams of Memphis and Chicago for constructing the 70 miles of canals for the Bayou Meto Drainage District No. 1, Lonoke, Ark. These canals will be cut the full length of Lonoke county, south and west of Lonoke, for reclaiming 71,000 acres of land, which will be fertile when drained. The contract was awarded at \$344,000, and will require the removal of 3,046,000 cubic yards of dirt. Bonds will be issued for \$375,000 and the drainage system is expected to be completed within three years.



# Louisiana Sugar Industry To Be Greatly Energized

ACTIVITIES TO BE ALONG INCREASINGLY SCIENTIFIC LINES—BAGASSE  
URGED AS CATTLE FEED RATHER THAN FUEL—CARBON FROM RICE  
HULLS FOR SUGAR REFINING—TRACTORS TO SUPPLANT PLANTATION  
MULE.

[Special Correspondence Manufacturers Record.]

New Orleans, La., June 14.

Sugar history was made today at the annual meeting of the Louisiana Sugar Planters' Association at the State Sugar Experiment Station in Audubon Park, which turned out to be the largest attended "Field Day" known to the members.

The "Field Day" was decidedly revolutionary in character. All membership dues and fees were abolished; three committees of progress were appointed to see to the appliance of science to all future endeavors of the association; men connected with various interests allied with the industry will henceforth be eligible to membership; from a purely growing and selling organization the association is to be changed to a purely scientific organization, with the sole object of putting the industry on a higher plane; it went into the latest discovery minutely, that of using the vegetable carbon of rice leaves and hulls for the decolorization of sugar; it listened to the latest methods of gaining the greatest amount of heat units from the burning of bagasse, then turned the other ear to the use of bagasse as a cattle food; it went thoroughly into the merits of the "gasoline mule" when various makes of tractors plowed, disked, harrowed and cultivated the fields of the station in a practical manner, and those attending the "Field Day" feasted on cookies, cakes and bread made from flour substitutes.

The revolutionary plan of an association without dues was perhaps the outstanding feature, although it was a day of features. The by-laws were changed, wiping out the initiation tax of \$10, an endowment fund having been acquired to take care of finances, and placing the future of the industry in the hands of three committees—a committee of agriculture progress, composed of C. C. Krumbhaar, chairman; J. M. Caffery and L. M. Soniat; mechanical progress, J. A. Pharr, chairman; D. G. Jackson and E. F. Dickinson; scientific progress, Prof. Charles E. Coates, chairman; Irving H. Morse and B. Sandmann. The industry, recognizing agriculture as the basic and greatest blessing to the people as a whole, saw the importance of applying the science of mechanics to the manufacture of sugar. The committees named were instructed to investigate the progress made in the three different branches of advancement, and they are to report to the association as a whole twice a year the different developments. This, it was maintained, would assure the greatest impetus the sugar industry of Louisiana has ever received.

An exhibit of the recent discovery of a vegetable bone-black substitute, made from charred rice hulls and leaves, was made by Prof. W. G. Taggart, director of the sugar experiment station, who explained the action on the sugar-molasses and its decolorizing properties. He said that with this cheap substitute, and with others of a vegetable base which his department is now working out, the sugar man would be able to clear his sugar right on the plantation where the cane juices were extracted and thus greatly cheapen the process of sugar-making by increasing the selling price of the extract.

The burning of bagasse as fuel from a scientific standpoint was the theme of a paper by Prof. A. Guell of the Louisiana State University, who claimed that the planters who used bagasse for their furnaces were not getting all of the heat units from it that they should.

An emphatic declaration against the use of bagasse as fuel was made by Charles H. O'Rourke, president of the American Molasses Meal Co. of New Orleans, who claimed that the sugar planters could get more profit from this so-called "waste" by converting it into a food by the addition of a little protein, which in the South could consist of cottonseed, and he produced a great many interesting figures to bear out his very broad assertion. "The combination," said he, "of bagasse and cottonseed is an ideal Southern balanced ration created by nature. One reason that beet sugar undersells cane

is because every unit is utilized, dried beet pulp having a ready market and a wide distribution. As fuel, bagasse has less than a \$1 a ton value. As a feed, it is worth from \$6.50 to \$7 a ton."

The advent of the tractor into the sugar business was hailed as a Godsend by T. S. Landry, who discussed these latest inventions from the standpoint of the practical planter. He claimed that the tractors now could do everything on the plantation cheaper, cleaner and better than the mule. While the tractor had attained great flexibility, he said, still the goal would not be reached until it has solved the lay-by-of-crops problem.

Miss Alice Hickman and Miss Rita C. Scott, of the home demonstration work of the Louisiana State University, showed the various substitutes for wheat flour, mixed-up cakes and bread before the gathering of planters and passed around most palatable samples of cookies, cakes, breads, etc., made from an admixture of peanut flour and wheat, cottonseed meal flour and wheat, and rice flour and wheat. The demonstration was most interesting in showing checks to be placed on the present high cost of living. To the planters it was interesting, as it showed a way out in the matter of feeding labor on the plantation.

The display of tractors, stackers, trailer cars and other mechanical inventions of great moment to an association just pledged to a scientific investigation and improvement, constituted the afternoon session. The tractors went into the sample plots of the experiment station, and every furrow they made with the plowshares was carefully scrutinized by the planters.

## NEW FACTOR IN INDUSTRY OF SUGAR REFINING.

Discovery of Bone Black Substitute from Carbonized Rice Hulls May Revolutionize Sugar Production in Louisiana—Conflicting Claims for Priority of Discovery.

[Special Correspondence Manufacturers Record.]

New Orleans, June 15.

The Louisiana Sugar Experiment Station has given me details of the process first made public last week of the discovery that a carbon made from rice chaff may be used as a substitute for bone black in sugar refining. A lucid statement was made of the actual discovery of the use of this heretofore waste of the rice fields in sugar decolorization; also of the three-cornered fight that is quite likely to be carried to the courts for the possession of the rights of the discovery.

The discovery of the effect of a vegetable carbon on sugar molasses was first made public by Prof. W. G. Taggart, director of the Louisiana State Sugar Experiment Station, Audubon Park, New Orleans. Professor Taggart in this statement said that his station had worked out such a decolorization experiment, found it practical and of great value to the sugar industry, and dedicated the findings to the sugar men at large.

The publication of this statement was immediately followed by one from Dr. Herbert M. Shilstone, a chemist, who has been in business in New Orleans the past few years, who claimed priority of the discovery made by the State Experiment Station and that he had "long since" applied for patents covering the discovery.

No sooner had Dr. Shilstone's statement been made public than another New Orleansian, George Blardone by name, came forward with a formal claim that he was the inventor of the process of obtaining carbon, or a vegetable substitute for lampblack, from rice hulls and straw; that he had been investigating the process for years; that he had applied for and had secured letters patent numbered 1,156,742, dated October 12, 1915, which specifically mentioned and described rice hulls.

He claimed that he had gone to Dr. Shilstone in the early part of May, 1917, to get his opinion as a chemist on the action of the charcoal thus obtained for the whitening of sugar. He claimed that Shilstone had become very interested and tried to learn its derivative which was told him as being made from the waste of a very cheap vegetable substance. An offer of partnership in the manufacturing of the charcoal, Dr. Shilstone asking for himself one-third interest, was denied, according to Blardone's statement.

Professor Taggart, when these statements were brought to his attention, frankly admitted that Blardone had submitted to him on occasion what the inventor termed a substitute for lampblack. Before that Dr. Shilstone submitted some of the same material, stating that he did not know of what it was composed, but wanted to find out. Taggart watched its application on decolorizing sugar, and found it worked and he guessed that it was rice chaff. We worked out his theory and sent it on to the United States Department of Agriculture, so that it would be placed beyond the reach of commerce and made a free gift to the sugar industry.

Outlining what has been done and what will probably be done in this, the first real advance in the clearing of sugar since the discovery by Derosne, in 1812, that animal charcoal would whiten sugar, Professor Taggart said:

"For a very long time chemists have been bending their efforts to discover some way of avoiding the use of the bone-black filter in the manufacture of a standard grade white sugar. Of late years this problem has been attacked from two sides: First, endeavors to use chemicals that would destroy or remove those objectionable substances contained or formed in sugar-cane juices, which interfere with the making of white sugar; second, endeavors to secure a carbon which would be more efficient than bone black, and more easily and economically used. From the latter lines of investigation have been produced vegetable carbons, "eponite," "norit." Norit has been used to a more or less extent in Java, Hawaii, the refineries of Europe, and a successful demonstration of it was given at this station during the past winter.

"The advantage of this material to the Louisiana sugar planter appears very great. By its use all of our sugars can be turned into a standard grade of refined before leaving the plantation, and after that is done the larger houses can buy raws and run as refineries, thereby using invested capital, which now lies idle during nine months of the year, thus enabling the owner to charge off from the home crop that pro rata share of interest on investment and deterioration from age.

"To summarize recent developments. An unknown carbon has been submitted to the Sugar Experiment Station by parties who wish information from its staff. An analysis of this material suggests a raw material that might be used to make a similar carbon. This raw material is tried and found good. Later a party claims the right to enjoy the benefits to be derived therefrom, and a second party produces a patent on the material as a substitute for lampblack.

"The Louisiana Sugar Experiment Station is working for the benefit of the sugar industry. What we have done in this case and what steps we have taken have not been to further our personal gain, but carrying out the dictates of a mind endeavoring to do a duty in a public trust. If the patent held by Mr. Blardone on this material as a substitute for lampblack covers the use of the material as a decolorizing carbon, then we gladly acknowledge the right. On the other hand, if that patent does not cover such use, we contend that the sugar planters of Louisiana should have the free use of such material, unhampered by any royalty and bound by no contract to any man."

The bone black (animal charcoal) is the carbonaceous residue obtained by the dry distillation of bones. Its decolorizing power was first applied in 1812 by Derosne to the clarification of the syrups obtained in sugar refining. For many years there has been a consistent and thorough search for more active and easily-managed reagents, especially during the past few years, when the prices of all animal matters have gone sky-high, bone black along with them.

Decolorizing the pure syrup obtained from the sugar-cane has always been a factor in successful sugar-making. The agent most used is a charcoal, preferably obtained from blood, which when shaken with a colored solution precipitates the colored substances, leaving the solution clear. It is by the use of this charcoal that the dark-colored impurities which arise in the manufac-

ture of sugar may be similarly effected. Other decolorizers are sulphurous acid, permanganates and manganates, all of which have received application in the sugar industry. None have had the combination of efficiency and cheapness of cost of bone black up to this time.

According to Professor Taggart, the making of the carbon from the rice leaves and thrashed hulls is a very easy matter, and the carbon can be produced in any home, for that matter. The vegetable matter must be burned as free as possible from air, and any retort capable of burning material in this manner may be used for the purpose.

The great feature of the new process will be its cheapness. The bone black is costly, while the rice hulls and straw are not, and more than that, while bone black has to be mixed pound for pound with the sugar to clear it, the new process with rice carbon needs only two pounds of rice decolorizer to every 100 pounds of raw sugar to make it "water white," the acme of clarification.

### Government Assistance Offered in Manufacture of Phthalic Acid and Phthalic Anhydride.

In an official statement Secretary D. F. Houston of the Department of Agriculture announces that the Color Investigation Laboratory of the Bureau of Chemistry has perfected, on a laboratory scale, a new process for the manufacture of phthalic acid and phthalic anhydride. This process, as carried out in the laboratories, appears so promising that it is thought that some manufacturers of chemicals and dyestuffs in this country may be able to supply their demands for these compounds by this process, provided the process can be reproduced upon a technical scale so as to obtain results commensurate with the laboratory investigations.

With a view to helping the chemical industry of this country, the Department of Agriculture announces that it is ready to assist manufacturers who wish to produce these compounds. The expenses of the technical installation and of the labor and materials necessary will of necessity be borne by the firm, individual or corporation wishing to manufacture the products. The chemists of the Color Investigation Laboratory will assist with expert advice, etc. The department reserves the right to publish all the data obtained from the technical experiments.

Since it seems very desirable that phthalic acid and phthalic anhydride be made available in large quantity in this country at the earliest possible moment, this offer of assistance will not be held open by the department for an indefinite period.

### Making Brooms of Palmetto Leaves.

Lafayette, La., June 15—[Special.]—State Senator J. R. Domengeaux, who owns and operates a broom factory at Lafayette, has found a substitute for broom corn in the manufacture of house brooms. When the price of broom corn began to soar because of war conditions, Senator Domengeaux decided to experiment with palmetto, which grows in profusion in this section. His experiments were successful, and his factory is now turning out a good grade of palmetto brooms that will be equally as serviceable as those made from broom corn.

The palmetto supply in Louisiana is practically unlimited, and it has heretofore been considered a nuisance by landowners. Steps will also be taken to experiment with palmetto roots in the manufacture of pulp and paper. The roots will be sent to the laboratory of the new pulp mill at New Iberia, La., where the tests will be made.

### White Roustabouts for River Steamboats.

New Orleans, La., June 15—[Special.]—Because of the scarcity of negro labor for river steamboats, boat-owners and agents are considering the employment of white deckhands and roustabouts. River men say they have never known a time when labor was so scarce on the levee as at present. Several boats were unable to make but one trip a week, when their usual schedules call for two, on account of delays in getting labor.

## "God Bless the Household That Boils Potatoes With the Skins On"

[Under the above heading the War Loan Committees of the American Bankers' Association present some remarkably strong statements and interesting facts which should be studied by every man and woman in this country.]

From this statement, which was issued in behalf of the Liberty Loan bonds, we have taken some extracts that deal with the food question, omitting those that relate specifically to the Liberty Loan, as the date for subscription to that has now expired, but so long as the war continues, and for some years after the war has ended, the appeal to the people of this country to reduce their own food consumption in order to help the starving people of Europe will be as important as it is now.

We recommend to our readers a thoughtful study of these statements.—Editor Manufacturers Record.]

Suppose that a lot of selfish, careless, thoughtless people throughout the nation so conduct themselves that you cannot get enough food for your family, so that your wife fails and grows weak and shaken before your eyes, so that your children weaken, sicken and die.

Suppose starvation looks at you through the hollow eyes of all you love best in the world. Wouldn't you be filled with loathing and contempt and bitter hatred for the careless, thoughtless people whose fault it was?

Then do not commit that fault yourself. Remember, as you would judge, so you shall be judged.

There is no bigger heart, no kindlier spirit, no more generous mind than yours—and 100,000,000 more Americans.

There is no more careless, thoughtless, happy-go-lucky, wasteful, prodigal and responsibility-evading nature than yours—and 100,000,000 more Americans.

There is too much courage built into you for your own good. You don't know you are in a fight until you are hunting for a club with an enemy after you with sword and gun.

If your dear ones starve, if there are black want and bitter suffering throughout the nation, your big heart will break with grief.

Isn't it better to put your big muscles at work now—to keep suffering and grief away? There is no more keen, efficient and productive mind than yours, once it is awake and knows it must work.

Wake up! Think! Act! Get busy! Protect your own—protect us all—if you want us all to protect you and yours!

There is not enough food to go around. Entire nations abroad are starving—men, women and children are dying like flies today in some countries of plain, sheer starvation.

We must send them millions of tons of food, and we will. There will be less for you. Wake up to it. You will have less to eat.

But you need less. You waste enough to supply the difference. Stop it! Every time you have potatoes for dinner you waste enough in the peelings to keep a starving ally alive for a day. Stop it! Don't peel new potatoes. Buy a five-cent brush and brush the thin skin off, saving all the potato. Boil old potatoes with the skins on. When done the skins can be peeled without waste.

### Some Simple Savings.

Make breadpudding from your bread crusts. It's good. We loved it 20 years ago. Don't market by 'phone; go pick the foodstuffs out. Don't run up bills. Pay cash—you get more and you save by it. Have fish for dinner twice a week. It's cheaper, very nourishing and a splendid brain food.

Eat cornbread half the time; there is strength and vigor in it, and it saves wheat. Go through your household affairs—stop waste! Go through your business affairs. Stop waste!

### You Must Fight.

Wake up then and fight! Fight waste and ignorance and sloth—fight indifference and blindness and dull, unthinking routine of every-day habits. It's dangerous if you don't.

And unless you do your part now, when we all need your help, unless you protect your family and our families, too, there will be penalties—heavy penalties.

Now you can save and invest for victory. If you don't, you will have to pay for defeat!

This is the nation's job. We all must help. The whole hundred million of us must help you—must stand with you to help you protect your family, and as you help us so shall you be helped and safeguarded by us all!

### Big Gas Plant for Aviation Station.

Contract has been awarded at \$379,856 for constructing and equipping the hydrogen gas plant of Langley Aviation Experiment Station and Proving Grounds at Hampton, Va., where the Government will expend millions of dollars. The Improved Equipment Co. of New York received the contract, and contract for building a dock and railway to connect the aviation plant with Back River has been awarded at \$22,000 to the Vaughan Construction Co. of Shawsville, Va.

The gas plant will include these features: Hydrogen generating building; flash charging building; steam boiler plant; blue-gas generator; No. 6 horizontal positive-pressure blower for blue gas; blue-gas exhauster; blue-gas holder of 25,000 cubic feet capacity; blue-gas scrubber; blue-gas meter; multiple vertical retort-type hydrogen furnace with hydraulic main and scrubber; hydrogen-gas exhauster; hydrogen-gas holder of 200,000 cubic feet capacity for 15x12-foot oxide purifiers for blue gas; hydrogen-gas relief holder of 5000 cubic feet capacity; four 10x6-foot hydrogen-gas purifiers; two steam hydraulic elevators; capacity 3500 cubic feet per hour when operating 22 hours daily, with provision for increasing to 7000 cubic feet per hour.

### For Cape Fear Packing Plant.

Plans and specifications have been completed for the meat killing and packing plant (daily capacity to be 300 hogs and 10 cattle) which the Cape Fear Packing Co. of Wilmington, N. C., will build at Navassa, N. C., on the Cape Fear River. They provide for a 180x60-foot four-story-and-basement reinforced concrete and brick construction packing-house, elevators, boilers, engine, generator and switchboard, packing-house machinery, refrigerating machinery and piping, steam fitting, etc. Bids for construction and equipment are to be received until July 11, plans being on view at the offices of the packing company and of the Atlanta (Ga.) Builders' Exchange. Plans, forms, etc., are obtainable on application to the company's architects, Wilson & Sompayrac of Columbia, S. C., and to the engineer, the Packers' Architectural & Engineering Co. of Chicago. The Cape Fear Packing Co.'s organization, with a capitalization of \$200,000 and with G. Herbert Smith as president, was announced last May.

### The Cotton Movement.

In his report of June 15 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 319 days of the season was 12,217,910 bales, an increase over the same period last year of 151,280 bales. The exports were 5,069,301 bales, a decrease of 160,824 bales. The takings were, by Northern spinners, 2,671,072 bales, a decrease of 269,611 bales; by Southern spinners, 3,943,639 bales, an increase of 291,957 bales.



On"

## "The Birds Nesting in the Trees" Speech Contrary to Yankee Spirit

The New York Times, taking issue with General Goethals as to the building of wooden ships, gives the following interesting contrast between General Goethals' do-nothing policy on wooden ships, as outlined in his speech at the American Iron and Steel Institute banquet, and what others in times past did in building wooden ships to meet emergencies. The Times says:

"The American public is not expert in shipbuilding matters. It has stood respectfully but anxiously aside from the controversy raging between those who are expert. It does not know whether General Goethals is right in maintaining that the ships to be built should be mainly of steel, or whether Mr. Denman is right in supporting wooden ships. But it wants ships built, built speedily; and there is no doubt that its ears were a little startled at the sound of General Goethals' declaration that wooden ships were impossible. He might be right, but his way of saying it was a new way in America, and the sound was unwelcome. He said:

"When it is considered that birds are still nesting in the trees from which the great wooden fleet was to be made, and it was proposed to construct from them ships capable of making from 10 to 11 knots per hour—and more than that when in the zone in which existed dangers from torpedoes—it is seen how hopeless the task appeared."

"This figure of speech about the trees still standing from which the fleet is to be made is a forcible one, but it is not wholly original with General Goethals. It has been used, with variations, twice before in American history, in 1814 and in 1862. In neither case was it used to prove the hopelessness of American effort to cope with conditions; strange to say, it was used for a contrary purpose.

In 1813 the great Macdonough, who won the victory which ended the war of 1812, found himself in command of an imaginary fleet on Lake Champlain, with a real and substantial British fleet confronting him. His fleet originally consisted of two small sloops, but the British sunk or captured them, 'and then there were none.' So Macdonough built him a fleet out of a forest of green timber that grew on the shore, and beat the British with it; and the British Army went back to Canada, and thus ended the War of 1812—for Jackson's victory was won after peace was declared. And, in celebrating Macdonough's great victory the orators of that day said, and the historians have repeated after them, 'When Macdonough came to take command the green trees were still growing in the forest out of which it was his task to make the fleet that was to destroy the enemy.'

"It was in this way, it was with this meaning, that the phrase became historic. The little touch about 'the birds nesting in the trees' is a twentieth century embroidery. But the phrase, as it was used in 1814 and through all the years after, whenever Macdonough was mentioned, was never used to demonstrate the impossibility—the 'hopelessness,' as General Goethals calls it—of doing a thing; it was always used to show, in a sort of triumphant chuckle, the way Yankee energy triumphs over impossibilities.

"The phrase came again into use when the civil war broke out and found the United States without a navy worthy of the name. It had to create one, as Macdonough did, in the face of the foe. That phrase, 'The trees were still growing in the forest,' was again brought into use, to emphasize not the hopelessness of attempting a thing, but the glorious way in which the hopeless thing had actually been done. For instance, among a hundred others who have used the phrase about this wonderful achievement, there is Blaine, who says in his 'Twenty Years of Congress':

"It may be instanced with laudable pride that one enterprising man, honorably distinguished as a scientific engineer, constructed in less than a hundred days an armored squadron of eight ships, in the aggregate of 5000 tons burden, capable of steaming 9 knots an hour, and destined for effective service upon the rivers of the Southwest. When the contractor, Mr. James B. Eads of St. Louis, agreed to furnish these steamers to the Government, the timber from which they were to be built was still standing in the forest and the ma-

chinery with which the armor was to be rolled was not constructed."

"A good old phrase, a historic phrase, a phrase connected inseparably with two events in American history that illustrate Yankee energy, Yankee dauntlessness, the Yankee scorn for impossibilities. It is forever associated with those events of 1814 and 1862. Now it has been brought into use in 1917. It seems a pity, now that it is brought into use again, that it should be used in so different a way, with so different a meaning, that so different a moral should be intended by it."

### CUMBERLAND'S \$2,250,000 TIRE PLANT.

#### Determining Final Details for Kelly-Springfield Buildings and Equipment.

Final plans will soon be completed for the \$2,250,000 automobile tire manufacturing plant which the Kelly-Springfield Tire Co. of Akron, O., will build at Cumberland, Md. Construction plans have already been completed to the extent that permits of proceeding with the concrete and foundation work and the pump-house, machine shop and garage. The engineers, S. Diescher & Sons of Pittsburgh, expect in the near future to complete plans for the main buildings, and the work involved will be sublet. Grading, concrete, steel work, etc., will be separated from the building construction. Practically all the machinery with power plant equipment has been purchased.

This big factory will have an ultimate annual capacity of 200,000 tons, and it will occupy a site of 75 acres. The buildings will be in the main four-story plant buildings of concrete and steel, with separate structures for power plant and office. Various accompanying improvements include the construction of an industrial city with sewer system, water supply, electric-light service, 60-foot boulevard in front of plant, 1000-foot retaining wall to prevent possible future overflow of river, dwellings, etc. During its first year of operation this plant is to employ 3000 men, which will be increased to 5000 during the second year, and later to 10,000. City officials at Cumberland estimate that 2000 homes will be needed for the employees, at an expenditure of probably \$6,000,000.

Cumberland was selected as the location for this big and important enterprise after an investigation of 60 cities by the Kelly-Springfield management, which expended more than \$60,000 for this purpose. Its advantages in regard to labor supply and river and rail facilities for receiving raw materials and shipping finished products were the principal features leading to the selection of Cumberland as the site. It is believed that the final completion of this establishment will mean an increase of 20,000 in the population of the city, which already has many important industrial enterprises employing thousands of men. Among these are Footer's Dye Works, with 550 men; Taylor & Co. (tinplate, etc.), with more than 650; Baltimore & Ohio Railroad shops, with 1800; Klots Throwing Co. (silk), with 300; Wellington Glass Co., with 175 men, and the United States Lead Co., with 120.

#### Wireless Telephone to Protect Forest Preserves—Device with Possibilities in Various Ways.

By RALPH H. BUTZ, Allentown, Pa.

The proper protection of the vast forest preserves owned by the Government is one of the most important problems with which the Forest Department has been dealing for many years. In order to make the better protection of these forests possible it has been found necessary to establish an adequate and efficient system of communication by which all points in the forest areas will be connected. Large areas of valuable timber are destroyed every year, most of which might be saved if instant communication could be had with forest rangers and nearby towns, so that help might be summoned in time to overcome the fire before it has made much progress.

According to the opinions of forestry experts, it will not be very long until this important problem of communication will be solved satisfactorily. These predictions are based upon a new system of wireless telephoning invented by Dr. H. Barringer Cox, who has been devoting much time to the perfection of this ingenious device. Dr. Cox is a well-known scientist whose work along scientific lines has been attracting world-wide attention. Before the outbreak of the war he spent some time in Germany assisting in the perfection of the recoil apparatus on the great guns in use by the German armies.

Dr. Cox demonstrated to forestry officials the utility and practicability of his wireless telephone for forest protection. The officials have been quick to recognize the advantages of a system of communication which does not make necessary the almost prohibitive cost of installing wires from station to station within the immense forest areas.

The basic principle of this wireless telephone is to vary the magnetic power of the earth, which is made observable in the vibrator to which the telephone instrument is attached.

Dr. Cox developed this invention on a forest reserve near Los Olivos, Cal. He established two stations in the woods, and there he worked alone until he could hear clearly a phonograph which he had placed at the one station, while he was experimenting with the receiving apparatus at the other station.

This system of communication has already been extended to four towns. San Diego, Los Angeles, Santa Barbara and Los Olivos are connected with the new telephone system.

It is a well-known fact that the ordinary telephone is grounded in addition to using a wire to make a circuit. Dr. Cox, however, uses only a one-way conductor. The wireless instrument uses the ground and no other connection. Messages can be transmitted as clearly through water as through ground, and just as easily.

The instrument itself is very compact, resembling a pocket camera, and in which is placed the ordinary telephone equipment. The box has four posts, two for dry cells and two for connection with the ground. The system of stations now in operation enables Dr. Cox to establish instant communication within a distance of 160 miles.

A forestry official, commenting upon this new device, said:

"A perfected system of telephonic communication on the great forest preserves in the West and South would be of great value to fire fighters. Every year at the end of the dry season there are hundreds of men scattered through the forest sections on the lookout for fires. A carelessly-dropped cigarette or the smouldering remains of a camper's fire may cause a conflagration that will destroy timber worth hundreds of thousands of dollars. For this reason it is essential that some means of instant communication may be had with other rangers.

"A system of wireless telephonic communication which employs an instrument small and compact enough to be portable would make it possible for a ranger in the most inaccessible part of a preserve to get into instant communication with one of the established stations from which the reserve of fire fighters might be called at any hour. Such a system would also obviate the expense of the installation of wires through hundreds of miles of rough country."

#### Creamery Interests Rapidly Developing in Mississippi.

Jackson, Miss., June 15—[Special.]—Mississippi's creamery interests are developing rapidly. Creameries are in operation in every section of the State, as many as three running full time in some counties, and every one is making money. Carload after carload of dairy cattle has been brought into the State, and in one instance a solid trainload of Holsteins was brought to Vicksburg to be sold at once to the farmers of Warren county.

At Brookhaven, one of the dairying centers of the State, one creamery two years old now has a payroll of \$10,000 a month, while another one year old pays out \$9000 every month. A 75,000-pound cold-storage plant has just been completed there. The largest cities in the South are buying the bulk of the creamery butter from Mississippi, and farmers are receiving Elgin prices for their cream.

## Development of South's Mineral Resources Depends on Wider Knowledge of Geology

NEED EXISTS FOR CLEARING-HOUSE OF GEOLOGICAL INFORMATION—  
RAILROADS VITALLY INTERESTED IN GEOLOGICAL CONDITIONS IN  
THEIR FIELDS OF OPERATION.

By CHAS. E. CHIDSEY, Pascagoula, Miss.

The article of Dr. Wm. B. Phillips of Houston, Tex., on page 62 of the May 24 number of the *MANUFACTURERS RECORD* (on oil prospecting) is interesting from many points of view, and especially the paragraphs:

"In this connection it may be said that the information derivable from ordinary well records is not only unsatisfactory, but even misleading. The samples are not taken with sufficient care, nor are they examined by one competent to identify and describe the formations that have been penetrated. There is the greatest possible need for a clearing-house of geological information, a place to which samples of cuttings may be sent with the assurance that they will be carefully and critically examined. \* \* \* The examination of surface conditions may be left to any well-trained geologist, but the study of well samples must be in the hands of those who have been trained for this particular work. It is best conducted through microscopic investigations, and these call for specially trained men.

"I do not think that we shall be able to use scientific knowledge in field operations for oil as it should be and can be used until the labors of the field geologist are closely linked with those of the trained microscopist. We have gone far, but we must go farther before we can hope to use science as it should be used."

Every word of the above is true, and should command the attention of every thoughtful reader of the *MANUFACTURERS RECORD*. I would add that we need also a wider diffusion of geological knowledge, and especially of the earth's crust, the ignorance of which has done much to retard the mineral development of the South. As an illustration of what I mean I will relate that when they were boring the first Delamorton well at Laine (now Kreola) in 1910, I made it my business to collect samples of the borings of the well and send them to the United States Geological Survey, a procedure that alarmed my neighbors, and it was seriously discussed whether or not a writ of *inquirendo de lunatico* should be issued, and I be examined, as I "was seen picking up old fragments of shells near that well and putting them in his pocket as though he had made a precious find." This is not a joke. I had made a precious find. For when those shells were examined by the conchologist of the Geological Survey (who, by the by, was a lady, Miss C. J. Maury) under a powerful microscope, she pronounced them to be the *Rangia Jonsonii*, an extinct species of clam, which, as Dr. Harris afterward declared in his report made in December, 1913, to be "of estuarine origin and indicated conditions favorable to oil and gas development. I would recommend a well be sunk about one mile north of the first Delamorton well, and, in my judgment, it will stand a chance of being a producer."

When I was sending the samples from the wells here to the United States Geological Survey I frequently got letters from it saying that "the shells in the samples are interesting," and that was all. Had I not already known from my individual studies and readings the meaning of those shells and the geological formation that they indicated, the information "they are interesting" would have been valueless. The United States Geological Survey, after you have made a "find," can tell you that you have made it, but it is powerless to tell you how to go and find it. In 1901 the first oil well was discovered in Louisiana, and the development after that was rapid, but not until 1910 was Bulletin 429 of the United States Geological Survey, "Oil and Gas in Louisiana," by Dr. G. D. Harris, published, which gives us much valuable information of how it happened, but had the State of Louisiana had to wait until the United States Geological Survey had discovered its mineral resources they would have been to this day unknown.

Do not understand me as finding fault with and criti-

cising the United States Geological Survey. On the contrary, it is not open to criticism along this line, as it has tether tied to it in the form of a United States statute that prohibits it from making analysis and giving out its data to private parties until the publication of its reports. Thus the data of the Pascagoula section will not be known to any but members of the survey until their report is published, which may not be for a year or more. I call attention to this matter in order to emphasize the necessity of having what Mr. Phillips calls a "geological clearing-house."

Some time ago I called attention of the readers of the *MANUFACTURERS RECORD* to the fact that a deposit of kaolin (secondary) had been found on the West Pascagoula River. I was led to the making of this investigation by examining some samples of clay brought from that section, and I then stated that "a deposit of kaolin exists in that neighborhood. Find it and bring me samples." More than 12 months passed before I could find one who understood my meaning and had intelligence to act upon it. This would not have been had there been a general knowledge of the geology of the earth's crust among the people. Railroads and other corporations have sunk a number of artesian wells in this section, but I have never been able to get the drillers to preserve the samples of the borings. They would always answer: "I am not interested in such things. My business is not geology, but well-boring."

Now, the railroad or other corporation that thinks it is not interested in the geology of the soil into which it is drilling an artesian well or making excavations for a railroad or road is deceiving itself. It is vitally interested, though through the ignorance of its managers it may not be conscious of the fact; for careful geological examination of the soil as its work progresses may lead to "finds" which, when developed, will bring many millions of dollars into the treasury of the corporation. Many of the most valuable mines of Canada were discovered by accident, and a history of some of these will serve to show the necessity of keeping a sharp lookout on well borings and the refuse of railroad cuts. The great silver mines of Cobalt were not discovered until 1902, and Mr. R. W. Brock, director of the Geological Survey of Canada, writing in 1909, commenting on this fact, says:

"To realize the unprospected nature of the country it is only necessary to remember that the greatest asbestos deposits of the world were brought to notice by blasting the Quebec Central Railway through them; that the greatest corundum deposits, extending in a belt 100 miles long, were found in a settled district by an officer of the survey only 12 years ago; that the Sudbury nickel deposits were discovered by putting a railway through them; that Cobalt, now the premier silver camp, although only a few miles from a silver-lead deposit known 150 years ago, was discovered less than six years ago, and then only by means of a railway cutting through a rich vein."

All of these great mineral discoveries were made by men not looking for them, but, fortunately for the railways and Canada, there were men near at hand who had a knowledge of geology and knew the value of these finds.

Mr. G. A. Young of the Department of Mines, Geological Survey, Ottawa, Canada, in 1913, commenting on the facts above related, says:

"In imperfectly prospected and unprospected regions there is an almost unlimited area over which the geological conditions are similar to those districts of known mineral wealth. The presence of like geological conditions implies the existence of like mineral deposits, for experience has demonstrated that the mineral deposits of any given district have resulted directly or indirectly from the action of the same general forces that gave rise to the broader geological structures and features of the region. Therefore, in order to indicate approxi-

mately only the probable extent and value of the mineral resources of a country, it is necessary to give at least a broadly generalized description of its geological features."

All of the geological evidence of the Gulf coast that has hitherto been collected indicates that Florida, South Alabama and South Mississippi are of a similar geological formation as that of the State of Louisiana, and that implies like mineral deposits, viz., oil, gas, sulphur, salt, and probably sulphate of lime (gypsum, plaster of paris), and although this is a self-evident truth, it is hard to impress the fact upon the minds of others.

For the past five years I have been constantly receiving reports of the existence of sulphur in this vicinity, but could never get any of the parties that had seen it to take enough interest in the matter to bring me samples, and only a few days ago some iron pyrites was found in the vicinity of this city, and when sent to the State geologist he reported that it was "marcasite." Only this and nothing more. Marcasite is a grade of iron pyrites that yields 53.3 of sulphur and 46.7 of iron, and is known to geologists as "paraffine base dome soil," and where found it indicates the presence of oil and gas in the territory, though it may not be at the exact spot where the marcasite is found. In Russia this pyrites is placed in immense steel retorts, and the sulphur, evaporating under the heat, passes over into a crucible and is made use of for making sulphuric acid, while the iron is used in the iron works.

A few days after this "find" I was explaining the matter to a man whom I knew lived in its neighborhood, and he stating that he had seen lots of it, and especially in the "buckshot lands of Mobile county," I suggested that he secure me samples. To this he demurred, saying: "You are trying to put one over me." To him this mineral was not even of a passing interest, and it was some time ere I could make him understand that I was in earnest and secure promise of his co-operation. I am familiar with the "buckshot lands of Mobile county," and that marcasite and other "things" may be found there is not at all improbable.

The foregoing facts will justify my contention that every railroad, every manufacturing corporation, every farmer and school child has a vital interest in knowing something of the geology of the earth's crust. But where will you find a subject that is treated with such universal indifference, an indifference that is born of ignorance? If some of the time that school children spend in conning and memorizing a string of useless names and dates, misclassified history, were used in learning something of the habits and chemistry of plant life, and the chemistry and geology of the earth's crust, the knowledge thus acquired would be far more interesting and would help make up a real education.

I am not knocking what you call "culture," and know that man cannot live by bread alone. But man must have bread first, else he will perish. I think I have a passing acquaintance with the classical and modern languages and literature, and know how sweet it is to note how close and accurate are the observations of Dante, Shakespeare and Robert Browning of human life and the world out of doors, but it is of more importance that the average boy and girl of the high school should be able to read on the earth's face the story that tells of the wealth that "the old beldame earth" has hidden away in her bosom. By developing the material resources of a country you make it possible that men and women will be free from the necessity of toiling day and night for a pittance that they may have bread, and when you do this you make it possible for them to have leisure to acquire the culture that breeds refinement. Good roads and motor cars, by bringing town and city closer together, are doing much along this line, but we must do more, and we must begin by dispelling the almost universal ignorance of the possibilities of the knowledge derived from an attentive study of the earth's crust. Let it not be forgotten that all the secrets of nature are not yet known, and the man that poses as an expert economic geologist upon the learning of 50, or 40, nay, of 25 years ago, and who has not kept in touch with the vast strides yearly made by physical science, is either a charlatan or an ass. Your real man of science is not cocksure that he knows it all, but seeks to search out the secrets of nature with awe and modest stillness and humility, for he has learned long ago that

There are more things in heaven and earth, Horatio,  
Than are dreamt of in our philosophy.



# The Church's Call to the Colors

[From The Standard, Chicago.]

"The annual sermon before the Northern Baptist Convention at Cleveland was preached by Dr. James A. Francis, pastor of the First Church, Los Angeles, Cal. It made a profound impression upon those who heard it, and the convention subsequently voted to have it printed in the Annual. But the speaker had no manuscript, not even 'a scrap of paper.' Fortunately, we have been able to persuade Doctor Francis to dictate his great message substantially as given at Cleveland, and we present it herewith to our readers." From this striking presentation the MANUFACTURERS RECORD makes the following extracts:

"We are standing at one of the most serious moments not only in the history of the American republic, but in the history of the human race. In 1861 the issue that was in the balance was, Shall this Union survive? The issue that trembles in the balance now is, Shall the liberties of the modern world, which have cost blood and tears of a thousand years, survive? No message is adequate for this hour except it deals with the greatest of themes.

"I will ask your attention to only two out of the many things Jesus told Nicodemus that night about this kingdom. The first is in the text; that no one can be a part of the kingdom, or even see it, except he have life from above. The life of God in man is the power of the kingdom. The second is found in the sixteenth verse, as if Jesus would say: 'Do you want to see what life from above is like? Then look at God himself. He so loved the world that he gave His only begotten Son.' It is the life of love expressed in sacrifice for the object of love. He who has never known sacrifice knows nothing about the life from above. He may think that he has been regenerated, but the very genius of the spiritual life is love expressed in sacrifice. The advance of the kingdom of God is always through the sacrifice of love. The flag of Christ has never been planted in a heathen land except by sacrifice. No realm of human thought or activity has ever been conquered for Christ except by sacrifice. No life has ever been brought into captivity of his obedience except through surrender and sacrifice. The death of Jesus on Calvary is much more than an event of history. It is the advertisement at one point in time of something that is eternal. It is thus that a great truth has been placarded across the centuries, that God lives forever the life of love expressed in sacrifice, and that only in so far as humanity becomes a partaker of this spirit does the kingdom come.

## America's Part in the War.

"I come now to the thing I came here this morning to say, namely: America's part in the present world struggle is a part of the cost of the advancing kingdom of Christ. If this is not so, then we have no business being at war. Unless this nation enters the strife with the ardor of a great crusade, we had better have submitted to the end. The business of the Christian church in America at this hour is to create the frame of mind of the nation when compelled to go to war. We can do it, and if the church fails in this hour she need never ask forgiveness of God or man. If the Christian church in America has no clear message for the people of today, then she is in danger of being brushed aside as a cumberer of the ground. Our people expect a clear, ringing message from the pulpit. Woe to the preacher who tries to make his old sermons do. He had better go and plant potatoes. What is the frame of mind which we should seek to induce in the American people? Let me mention some of its elements.

## The Righteousness of Our Cause.

"First: A clear consciousness of the rightness of what we are doing. Is it ever right for a Christian to fight? Yes, and when fighting is permissible, it is not only permissible, but it becomes a supreme duty. I will take insult without fighting. I will take wrong to my property or person and not fight, but when helpless people or a sacred trust given me by Divine Providence are in danger, then there is something worth fighting for, worth dying for, and (I speak as a Christian) worth killing the other fellow for, and that is the American situation today. We are not revenging insults, we are not seeking redress for property de-

stroyed, and we do not want a foot of anybody's land or a dollar of anybody's money. No nation ever entered a war with a clearer conscience or a more righteous cause. Reason has been tried for two and a half years persistently, until it is evident to all the world that we are dealing with a frame of mind that will not listen to any such appeal. I heard the man who was Lord Roberts' chief of scouts in the Boer War say the other day that the only time when he ever felt a yellow streak in the hour of danger was when there was something yellow in the undertaking in which he was engaged. Our business is to make the facts so clear to the entire population of this land that all shall know that no other course was open to us.

## Understanding the Enemy.

"The second element in this frame of mind is to understand the frame of mind of the enemy. Let me mention some things in the German frame of mind. (I say Germany, for Austro-Hungary, Bulgaria and Turkey are but vassals of the central actor.) Germany as a nation feels herself aggrieved. From 1871, when the empire was born, to 1896 Germany was busy consolidating her new empire. She cared nothing about colonies. Bismarck did not believe in colonies, and said so frankly. By 1896 the great German empire was pretty thoroughly organized. Her population was growing fast. She began to look around for space in which to colonize under her own flag, and, lo, Britain, Russia and France had picked up everything that was out of doors. Russia had the northern half of Asia and was bearing down with constant pressure upon Mongolia, Turkestan and Persia. France had added as her sphere of influence 45 per cent. of the surface of Africa. The sun never set on the British dominion. All that was left for Germany was a few bits in 'White Man's Grave' in equatorial Africa, some small islands in the Pacific, and a slice of China, which she took on the excuse of the murder of two missionaries. Let us be fair. Try to imagine yourself a German. Your people growing from three-quarters of a million to one and a half millions a year, and nowhere to put them, while France, with a stationary population, controls half a continent; Russia rules wide sparsely-peopled stretches of Siberia, and England has her Canada and Australia not one-fourth occupied. No fair-minded man can see this situation without having a deep sympathy with Germany's aspirations.

"A second element in Germany's frame of mind is the consciousness of her own efficiency. We can hardly blame her for this. She has come nearer eliminating both slums and poverty, she has come nearer stopping immigration by making it worth while for her people to stay at home, than any other country in Europe. With a fair field for competition she was driving other commercial nations out of market after market, and she has the same efficiency in war as in the arts of peace.

## Germany's National Hero.

"A third element in her frame of mind is her national solidarity around her national hero. Say what we will about the Kaiser, he is the most forceful sovereign in the world today—the most unsleeping man in Europe. Sometimes I think it would take all the other kings of Europe and then a full-sized man thrown in for good measure to make Wilhelm II. He is the hero of the German nation. There is no other king in this generation that is so fully the hero of his people.

"But a fourth element must be reckoned with in the German frame of mind. I will not charge this up to the whole nation, save as the nation follows its leaders. If we could pick out 500 key men in the United States—Roosevelt, Root, Lodge, Wilson, and others like them—and inculcate these 500 men with an idea, and then wait one generation, we would find that idea on every farm and in every workshop between these oceans. We don't charge the thing I am about to say to the German people from the bottom up, we do charge it to them from the top down. The thing itself is *ruthlessness*. This war, forced by Germany, was begun with the words (I quote from the Chancellor): 'Gentlemen, the thing we are about to do is wrong, I

speak frankly, but it is necessary, and when one is situated as we are the only concern is how he can hack his way through.' The sinking of the Lusitania, the torpedoing of hospital ships, the rape of Belgium with the enslaving of its inhabitants, the collecting of indemnities from the Belgian cities, and, more awful, the silent O. K. of Berlin on the Armenian massacre, all are a part of the same system. Nineveh stands at the head of the list as the most cruel people that ever held the scepter of power, but even Nineveh never undertook the extermination of a whole race. We have witnessed in the last two years the deliberate attempt to exterminate a nation of four and one-half millions of people. This has been done by Turkish soldiers, sanctioned and financed by the German Government and in some instances under German officers.

"The Hohenzollern dynasty, the German Government, the military autocracy (mark, I do not say the German people) stand today at the bar of the conscience of the civilized world damned beyond the hope of forgiveness, and I for one am prepared to pray that the world will never see an hour's peace while the Kaiser is on the throne.

"We are certainly up against the real thing. Do not think for a single moment that Germany is beaten yet. Remember that Germany has eleven millions of trained soldiers that can obey the call to the colors, that for nearly three years they have held up the civilized world. Please do not hark back to the Spanish-American war. That was an afternoon tea. And do not imagine that the United States can do her part by advancing money, even by the tens of billions. We have against us the most awful combination of ruthless dehumanized efficiency in the shape of a military machine the world has yet seen. Germany expects to collect indemnity. One hundred and twenty billions of dollars would be a moderate figure in case she is victorious. At least 75 per cent of this would come from the United States. Germany knows perfectly well that England's war debt is 22½ per cent. of her taxable wealth, Russia's about 24 per cent., and the war debt of France approximately 20 per cent., while the debt of the United States, after raising the present five-billion-dollar loan, will be barely 2½ per cent. of our national wealth. The power that would collect fifty million dollars from one Belgian town and eighty millions from another, simply because they declined to break a treaty—what would such a power do if it could get a line on New York? Aside from this, the degradation and humiliation to which this country would have to submit if our whole national life was once under the iron heel of Prussia is beyond imagination. We are not half awake. I fear it will take one or two good knocks to arouse the latent patriotism in the American people, and these knocks are coming to us one of these days.

"It all seems so far away. Our people can't realize as yet that we are at war. It will not be so far away twelve months hence. Unless something unexpected happens, we are in for a long, bloody fight, and we may as well adjust our thinking to it now.

## Mobilization of Our Resources.

"The third element in our frame of mind is a determination to mobilize all the resources of the United States with the thoroughness that we see in Germany. We need our entire resources of men, women and money mobilized like a clenched fist for the work which under God we are called to do. Let us not lose our heads; above all, let us be fair to our German-American citizens. We have no business to hold it against a man that he was pro-German a year ago. Perhaps it was as natural for him to be pro-German as it was for some of us to be pro-British, but God pity the traitorous cur who, having sworn allegiance to the Stars and Stripes, is pro-German now."

## Canning Company Co-operating With Producers.

Macon, Ga., June 18.—[Special].—The Macon Canning Plant has begun operation and is prepared to receive and take care of all produce delivered at the plant. Fruit and vegetables will be canned on toll system or purchased outright, as patrons may desire. Farmers, truck raisers or owners of small gardens who are unable to deliver their produce can avail themselves of automobile truck, which will call at their homes upon request by mail or telephone.

# Sulphur and the Food Supply

By COURTENAY DE KALB, in Mining and Scientific Press.

The article contributed to this issue by Dr. P. J. O'Gara, the director of the agricultural experiment station maintained by the American Smelting & Refining Co. near Salt Lake, Utah, is a message full of significance for the nation at this period of stress. We must feed England and France as well as our own people; we must feed an army that will grow from month to month until it will number millions of men; we must feed an increasing horde of workers in the factories. It is estimated that this industrial army alone will need to be augmented more than 25 per cent. within the coming year in order to provide the multitudinous supplies that will be required in the conduct of the war. Although women will supply the call for labor to some extent, the fact remains that there will be fewer men available to produce the food that is essential for sustaining the nations warring to preserve the institutions of liberty. The call from Washington to turn every lawn into a garden, to turn every boy into a producer of potatoes and beans and corn, is prompted by a clear vision of the insufficiency of farm products that we are facing. We must have enough food to supply our vital forces or we shall weaken, and that means disaster.

The lesson that Dr. O'Gara teaches is that sulphur will make one man more than the equal of two in the raising of wheat, and the equal of four in the raising of peas, to name no other crops. It appears that the use of elemental sulphur as a fertilizer at the rate of from 300 to 400 pounds per acre is an energetic stimulant to nearly every variety of crop. As compared with untreated lands the increase of yield is from 63 per cent. for potatoes to 383 per cent. for peas. The grains are all strongly responsive to the influence of sulphur, especially on soils that represent the decomposition products of granitic rocks, but the most amazing effects are produced with the leguminous plants.

Dr. F. C. Reimer of the Southern Oregon experiment station, has shown that the cut of alfalfa can be increased in some cases as much as 500 per cent. by harrowing in 300 pounds of raw sulphur per acre. Equivalent improvement is obtained with beans and other legumes. To achieve such results is like multiplying the land, and is even more than multiplying the tillers of the soil, for it represents an increase in production without more mouths to feed.

The American Smelting & Refining Co. has done a great service in applying the methods of the trained technologist to demonstrate that the smelter not only should live as the harmonious contributor to the welfare of his agricultural neighbors, but that the farmer needs him as a resource for the sulphur and sulphuric acid with which to improve his soils and increase his net returns.

We pointed out a few weeks ago the splendid work of Dr. C. B. Lipman of the California experiment station in reclaiming alkali lands by the use of sulphuric acid. This in itself showed that the old feud between smelter and farmer was coming to an end. The employment of elemental sulphur, however, extends the possibilities for both. Sulphur has a wider range of usefulness; it is adapted to soils to which the addition of acid would be undesirable; it is suited to the conditions of Georgia, or Virginia, or New Jersey, as well as to the alkali lands of the Salt Lake basin or the San Joaquin valley.

It may be said that the one important limitation upon the adaptability of sulphur is that it may produce acid soils unless sufficient lime be present. The use of lime and sulphur together is indicated where there is a tendency to sourness. Gypsum is also a stimulant to the bacteria that promote the nitrification of soils, so necessary to the active growth of beans, peas, clover and alfalfa; and it also shares with lime, to some extent, the function of flocculating or "loosening" loams that are heavy with clay. The presence of abundant lime is necessary to provide base for the excess of acid formed in the process of bacterial nitrification, which otherwise would stop. Also, an excess of base must be present to take care of the sulphuric acid produced by the bacterial oxidation of the sulphur, in order to yield the neutral sulphates, in which form only the plant can take the sulphur into its circulation. All this suggests possibilities of utilizing readily available raw resources of sulphur and gypsum to increase our food production immediately,

without waiting for the smelters to get ready to turn out elemental sulphur and sulphuric acid in quantities adequate for yielding the prompt results that the nation demands.

It is desirable, before approaching that side of the subject, to call attention to a fact that had been overlooked until recently concerning the needs of plants. Determinations of the sulphur in their composition had been based upon analyses of the ash, which showed insignificant quantities of that element. It was then discovered that sulphur was present in surprising amount in the form of volatile organic combinations, and perfected methods of analysis have now demonstrated that sulphur enters into the composition of many plants of high economic value in even greater proportion than phosphorus, potash or nitrogen.

The story of Dr. Reimer's investigations, following a method of elimination which finally proved that it was the sulphur that gave the stimulant needed by some of our most useful crops, possesses the quality of romance. He found that alfalfa holds in its tissues seven pounds of sulphur per ton of dried cut, while it contains only five pounds of phosphorus. Rape is still more remarkable, secreting in its tissues 20 pounds of elemental sulphur per ton. All plants require sulphur in some proportion, and even where the amount absorbed is not large, as in the case of cereals, the gradual formation of sulphuric acid, by oxidation of the sulphur, accompanied by the liberation of hydrochloric acid from the chlorides present, causes decomposition of the silicates with the ultimate production of sulphates of the alkalis. Thus the potash in feldspathic particles, which is particularly abundant in soils derived from granites and in the great areas of residual soils covering the pre-Cambrian rocks that stretch along the Atlantic coast from Pennsylvania to Georgia, is liberated in soluble form as a result of adding sulphur.

The agricultural experimenters possess the progressive qualities and also the conservative limitations that are characteristic of highly trained research technologists. They have opened up the possibilities of utilizing sulphuric acid and elemental sulphur to cure the defects of excessive alkali, and to stimulate productivity to a degree that seems marvelous. They have done more than merely to show how to turn smelter fume from a cause of litigation into the greatest boon the Western farmer has been offered, next to the waters for irrigation. They have revealed how suddenly to multiply many-fold the food resources of America. With the modesty characteristic of accomplished scientists they hesitate to insist upon energetic action until their field tests shall have repeatedly confirmed in every detail the results obtained; but the country needs to utilize what they have discovered and to do it now. These men have shown that plants need sulphur; that to supply it increases their growth at an enormous rate; they have shown that the sulphur promotes the nitrification of soils when sufficient alkaline sulphates are present; they have demonstrated that the readiest solution of the potash problem in its more acute phases is to add sulphur, which results in releasing the potash in a form requisite for plant assimilation, while the sulphur supplied gives the lustrous deep green significant of a healthy, vigorous growth.

We have found lately a great potential resource of potash in the cement and iron furnace plants of the country. This can be rendered available more quickly under a military mobilization of our resources than would be possible through the partial reconstruction and elaborate additions necessary for recovering elemental sulphur and sulphuric acid from our great copper-smelting plants. In a year or 18 months they might be yielding large amounts.

Meanwhile, sulphur is immediately available from natural deposits, close to transportation conveniences, in several Western States. At Thermopolis and Cody, in Wyoming, it has been found in limestone, associated with travertine and gypsum, and can be excavated in open quarries. In the San Rafael canyon, in Utah, is another deposit of similar type, having a greater preponderance of gypsum. In El Paso county, Texas, near Guadalupe and Toyah, is an area nearly 50 miles in length and over 15 miles in width where gypsum beds

impregnated with sulphur to the extent of from 10 to 20 per cent. occur in multitudinous outcrops, and where many large areas exist from which sulphur-bearing gypsum three to four feet thick can be obtained by removing less than three feet of overburden. In the same district are earthy deposits, containing more than 50 per cent. of gypsum and 25 per cent. of sulphur, that have been explored to depths of 40 feet.

Feeble efforts have been made to extract sulphur from all these deposits, but the great opportunity that they offer is that of pulverizing and shipping the material as it is for direct application to soils in order to increase the yield to meet the demands of the present crisis. The contained gypsum and lime would be helpful, as we have shown, in promoting conditions favorable to the increased growth of plants. What would be the effect of a single million tons of the crushed rock with 15 per cent. of sulphur? It would amount to 20,000 carloads, which, incorporated into wheat lands in the autumn, would add apparently more than 15,000,000 bushels to next year's crop. It would increase the crop of beans from 1,000,000 acres by 2,000,000,000 pounds; it would multiply the output of peas from that area by 5,000,000,000 pounds. Is it not worth trying? We shall soon expend more money than this would involve in the mere testing of new devices for warfare. It may not do all that we hope, but intelligently directed it can be counted upon to more than double the yield of the acreage that can be reached with the sulphogypseous output from the sources mentioned.

A militarized nation will not hesitate; it will commandeer the men who know how to find and distribute and utilize these natural resources of combined sulphur and gypsum to help in feeding the men that are fighting for our country.

Thus one part of the problem of providing sulphur, fixed nitrogen and soluble potash can be solved without delay. It can be made to affect some of the late crops of the present year. Meanwhile, the Government could take a hand with the American Smelting & Refining Co. and other smelters to insure that a sufficient output of by-product sulphur for agricultural purposes will be provided for the future.

## Mississippi Women United for Patriotic Work.

Jackson, Miss., June 15—[Special.]—Mississippi women have completed their organization to enlist the forces of every woman of the State in helping the United States make war against Germany. Two meetings have been held in this city, the Industrial Institute and College at Columbus has been chosen State headquarters, and work of registering every woman in the State has begun.

Each one registered will have her especial qualifications, whether they be skilled with the needle, with a cookstove or with an automobile. When the registration is complete the cards will be preserved, so that the full woman power of the State will be available whenever the Government calls for it.

There will be no claims for exemption, and the registration is expected to be complete, although it is purely voluntary. Hundreds of the women in Mississippi are already in the front line food trenches preserving and canning fruits and vegetables.

The first unit of the boys' industrial army was formed here during the past week also, and a number of youngsters enrolled for service on farms.

## Fruit Canning Industry Development.

Charlottesville, Va., June 15—[Special.]—The canning plant of the Albemarle Products Corporation, which was totally destroyed by fire last December, is now rebuilt and enlarged and is operating under efficient management with a capacity of three thousand gallon cans daily of all kinds of fruit and vegetables. This company's canned apples and other products are sold all over the United States. One hundred thousand gallons of pure cider vinegar were also made last year.

The successful development of this industry will be an incentive to the farmers of Albemarle county for increased production, besides furnishing employment for many hands, and it is destined to be one of the important industries in this section.



# Proper Education of Negro Race National Rather Than Sectional Problem

[Special Correspondence Manufacturers Record.]

Washington, D. C., June 16.

A comprehensive report on negro education, just issued by the bureau of education of the Interior Department, covers a subject that is properly described as a national rather than a merely sectional problem. Nevertheless, its interest to the South is obviously greater than it could possibly be to any other section of the country.

The report represents three years of intensive study by a corps of workers representative of education in both the North and the South, under the direction of Dr. Thomas Jesse Jones, who is responsible for its compilation.

Of the report in general it may be said that, while it recognizes the numerous conflicting views connected with the entire subject, as well as the various irritations which these have produced in the past and are still capable of bringing about, the entire field of disagreement has been considered in a fair and impartial manner. As an instance, the report takes candid cognizance of the fact that the "Civil War and reconstruction days created feelings and misunderstandings that included the whole country." But whatever of these differences may remain, it wisely concludes that "the economic future of the South depends upon the adequate training of the black as well as the white workman of that section," and that "the fertile soil, the magnificent forests, the extensive mineral resources and the unharnessed waterfalls are awaiting the trained mind and the skilled hand of both the white man and the black man." That the educational leaders of the South realize the economic importance of the negro is amply attested to by the facts presented in the report.

It is of interest to note that although the nation-wide propaganda for crops and still more crops had not begun at the time the studies on which the report is based were commenced, one of the most emphatic conclusions reached was that colored boys and girls in school should be well drilled in the theory and practice of gardening. "Along with gardening," continues the statement, "should go training in the few simple trades that are of use about the average home. Just as it is unconstructive policy to teach large-scale farming to those who never will work more than a few acres of land, so is it considered an unnecessary waste of the pupil's time and the public or private investment in the school to teach skilled trades exhaustively when what is wanted is development of common sense, 'gumption' and ingenuity in improving the house and farm."

This policy of simplicity in training for a population more than three-fourths rural is intended to apply to the elementary education of the children. For those who show aptitude for large-scale farming, more advanced teaching is advocated. But stress is laid on the necessity for improvement in the elementary schools.

Despite all shortcomings, the report shows that the public school systems of the South have been largely responsible for reducing the colored illiteracy rate from nearly 100 per cent. at the time of emancipation to the present rate of less than 30 per cent. The progress of the negroes in rural districts during this period is also traced. Today, as owners and tenants, they farm 41,500,000 acres of land, 3,000,000 colored men and women being engaged in agricultural pursuits. This amply justifies the further statement that it is in the rural districts that the negro has made his most remarkable progress, and where his most pressing needs are still presented, and that any comprehensive scheme of negro education must have its basis in the welfare and development of the countryside.

Among the patent defects of present methods in furthering negro education the report notes the tendency of Northern philanthropy to contribute money and advance theories without in either case possessing the requisite acquaintance with the conditions involved. Notwithstanding these facts, it finds much evidence to indicate that the Southern people recognize that Northern teachers have rendered a valuable service not only to the negroes, but also to the South, despite the fact that the proper education of the negro is the South's immediate concern.

Another feature deplored is the tendency to turn over

the education of the negro to his own race before enough of its members are prepared for the responsibilities. More than half of these teachers, the report finds, have not themselves had an education equivalent to the first six grades. There are now 30,000 teachers for colored children, or approximately one teacher to every 65 children of school age. With the character of ability thus low, and a demand for about 6000 recruits annually to keep the ranks filled, the necessity for adequate teacher training becomes apparent.

The report makes mention of the few schools for higher training, and comments significantly on their titles, such as "The High Educational College of Glory," in Delaware, as significant of some of the problems that are met. It says in this connection:

The extravagant and high-sounding names of a large number of colored schools have led to a misconception of the grade and type of work done by them. Frequently they represent only the hopes of the founders. In other cases the names have been selected to satisfy the ambitions of the colored people or to attract the support of the white people. In these instances the terms "university," "college" and "literary" usually indicate that the financial support is obtained from the negroes; the titles "industrial," "agricultural" and "rural" form a bid for sympathy and contributions from white people. Some schools in their eagerness to offer college courses not only hamper their general work, but bring ridicule on efforts to maintain college classes. Other institutions, impressed by the great plants of the large industrial institutions, spend so much energy and money in acquiring machinery and elaborate organizations as to seriously impair their educational efforts.

The importance of the bearing of the whole problem of education, and the necessity of its right adjustment to the conditions involved, are strengthened by the following significant statements extracted from the report:

There are in the United States practically 10,000,000 negroes, a group rivaling the immigrants in total number and far exceeding them in the problems of economic and social adjustment. In the South they form 29.8 per cent. of the total population, the proportion in Mississippi and South Carolina being over 55 per cent. and ranging in the "black belt" counties from 50 to 90 per cent. of the total population. Almost 3,000,000 are engaged in agricultural pursuits in the Southern States. The number of farms cultivated by them increased 20.3 per cent. between 1900 and 1910. As farmers, renting and owning land, they cultivated 41,500,000 acres, an area over twice the size of all the farm land in Virginia or in the New England States. As farm laborers they undoubtedly cultivate a much larger area. Though the United States census shows a decrease in illiteracy, there are still about 2,225,000 negro illiterates in the South, or over 33 per cent. of the negro population 10 years of age and over. Likewise, the death rate of the colored people is still very high, though the vital statistics indicate a gradual improvement in health conditions.

Whether the causes are within or without the race, the fact remains that the death rate of the colored people is 24 per 1000 as against 15 for the whites, and that the prisons of the South Atlantic States have proportionately five times as many colored prisoners as white. Just as the decrease of illiteracy and the increasing ownership of land are sure evidences of the inherent worth of the colored people and of the genuine friendship of their white neighbors, so the high death rate and the large prison population are certain proof that there are either serious problems of education within the race or unfortunate limitations placed upon them from without, or both.

As the negroes are the primary element that give rise to the problem, so are they becoming more and more an important factor in its solution. Their contribution includes both an increasing financial support and an even larger proportion of the teaching force. They contribute not only a goodly share of the taxes for their public schools, but also a considerable sum toward the private schools. Furthermore, the colored people give considerable sums to extend the terms of the colored schools. It is probable that their total gifts aggregate \$500,000 annually over and above their share of the public taxes.

This increasing responsibility of the negroes for their own education is one of the hopeful signs of the progress of the race. It is not only sound democracy by good pedagogy to work with a people rather than for them. So far as this principle is realized in the tendency to turn over the colored schools to colored teachers, the movement is sound. There is, however, considerable ground for the apprehension that the rapidity with which white teachers have been eliminated is too largely explained by the desire to be rid of an unpleasant duty.

The report contains a vast amount of statistics on

educational conditions in the various States, and even in the counties of the States, in addition to the general facts that have been quoted. As a whole, it presents evidences of having been prepared with much care and without any attempt to square its conclusions with pre-conceived ideas. For this reason it doubtless will prove of much value, when placed in the hands of those interested in the important problems discussed, whether of educators in the North or in the South, or of the members of the race itself who are searching for the best light obtainable on the various and at times perplexing questions involved.

## The Rev. Dr. Porter Understands the Case.

The plea of the pacifist, as we understand it, is that under no circumstances has the Christian the right to draw the sword. Not in his own or his country's defense must he resort to force, but must sit by in cowardly silence while property and life are being taken.

It will be admitted that when a sufficient number of red-blooded Americans can be brought to believe this socialistic fallacy the German flag will take the place of the American flag on our Government buildings at Washington. Yea, more, the men and women and children of America would become serfs of a Christless Kaiser, who regards the laws of neither God nor man. Should our bodies and souls become paralyzed by this delusive and deadly dream, we would be justified in sitting by in sinful and accursed silence while the burglar, the murderer and the rapist defile and destroy our homes.

Such false ideas may be preached in the name of the Prince of Peace, but clearly they are contrary to the ideals and acts of the Man of Galilee. For our own part, there are times when we are ready to exclaim with the Psalmist, "Blessed be the Lord, my strength, which teacheth my hands to war, and my fingers to fight." The Master Himself hath said, "Think not that I am come to send peace on earth: I came not to send peace, but a sword."

Should we be called upon to give our life in defense of the land we love—and we are ready when the call comes—as our lips close in death we will murmur the martial words of the militant Paul, "I have fought a good fight, I have finished my course, I have kept the faith."—Rev. J. W. Porter, D.D., Editor Western Recorder.

## Veneer Mills in Mississippi.

Jackson, Miss., June 15—[Special.]—Veneer mills in number are being started in South Mississippi, and promise to become an industry of value to that section. The Mutual Package Co. of Benton Harbor, Mich., has bought a site for a mill at Ellisville, and will manufacture veneer there to be shipped to its box factory in Michigan. The mill will employ from 50 to 60 persons.

The largest mill of the kind yet projected in this section will be at Jeffris, La., just across the Mississippi River from Natchez. Armour & Co. are interested in the project. The plant will be extensive, and will turn out completed wooden containers of various sizes. It will employ from 250 to 300 men, and will begin operations shortly.

The plants use many woods that have hitherto been wasted, and will be able to operate long after the yellow pine mills have cut all their available timber.

## Hydraulic and Electric Tile Presses.

N. V. L. E. TELS & Co., Padang, Sumatra, Dutch East Indies.

There is a demand here for hydraulic tile presses and electric tile presses of capacity 1000 tiles per day—500 atmosphere—size of tile 19x12 inches, together with the necessary schallones. Communicate this inquiry to makers, with request that they give their best offers by mail, together with full details and best discounts. Prices should, if possible, be c. i. f. Soerabaya, cash against documents in the United States. In the event of business resulting, we shall open a credit with our bankers, Goldman, Sachs & Co., 60 Wall street, New York.

# Our Inland Waterways an Asset in War Times

By JOHN A. FOX, Washington, D. C.

Nearly \$400,000,000 have been spent on the Panama Canal. We are talking today of \$750,000,000 for immediate ships and shipping, and yet if we had expended \$200,000,000 during the last 10 years in carrying to completion the adopted projects for definite and adequate improvement on the larger interior rivers of the country we would have had at our disposal today nearly 5000 miles of reliable water transportation routes extending from New Orleans to Kansas City on the west, to Minneapolis and St. Paul on the north and to Cincinnati and Pittsburgh on the east.

It is not my purpose to discuss in this article what might have been done or what should have been done. The war crisis is here, and the transportation crisis predicted by the MANUFACTURERS RECORD, the late James J. Hill and others is approaching, and we must make the best of what we have.

There are approximately 25,000 miles navigable interior waterways threading the country that can be utilized to great advantage in solving the vexing transportation problem that confronts us, if the proper steps are taken to supply the necessary boats and barges and provide suitable docks, terminals and unloading facilities.

We may not be able to bring all these water routes into effective service during our strenuous war preparedness program, but there are a few main arteries that can certainly be made use of. The Mississippi River and its principal tributaries, the Missouri, the Ohio, the Arkansas and the Red rivers, would prove a most valuable asset as a transportation factor just now if brought into service. This extensive system of rivers reaches the commercial centers of the vast North American bread basket lying between the Rockies and the Alleghenies, and if used could be made to carry to the seaboard at cheaper rates than the existing rail rates millions of tons of fuel, food supplies and munitions for the warring European countries.

If you will lay before yourself a map of the United States and draw a circle around the strategic assembling points for food supplies and raw materials you cannot help but be impressed with the striking fact that a water route leads from that point to the seaboard at New Orleans. Take Kansas City, in the center of the grain and meat-producing section of the West, and you will see how logical it would be to assemble at that point by rail millions of tons of these raw food products and reship them down the Missouri and the Mississippi by properly equipped barges to the waiting ships at New Orleans.

Minneapolis and St. Paul are known the world over as the flour center of this continent, and you could not help drawing a circle around this point as one of your strategic assembling points. You will then notice that a 2000-mile water route leads straight south to the shipside at New Orleans, and 500-ton barges properly equipped and economically loaded and propelled would be able to bear millions of tons of traffic to the relief of the overtaxed railroads.

Turn then to Chicago, the second largest city of the nation, with its multitude of well-equipped workshops ready to turn out supplies for the armies of Europe. You certainly must draw a circle around this strategic point. Then notice that by the water route leading from the back door of Chicago you could move down the Chicago Canal, out the Illinois River and on down the Mississippi River to the waiting ships at New Orleans millions of tons of manufactured equipment for the army—shoes, uniforms, bedding, harness, saddles, shovels, picks, wire fencing—in fact, every conceivable article of equipment needed is manufactured in Chicago.

Move on eastward then and seek the most obviously strategic point west of the Allegheny Mountain, to draw your circle around—Pittsburgh, the very center of the steel and iron production of the country. Our armies and our allies are going to need millions of tons of the steel products manufactured at Pittsburgh—rail, armor plate, guns, projectiles, wire—and these must be moved to the seaboard as cheaply and as quickly as possible. Look now at the Ohio River, leading away toward the Mississippi and the Gulf of Mexico, unused, waiting and ready to bear down grade on its broad channel millions

of tons of these much needed war supplies that cannot possibly find enough freight cars to move them when the time comes.

Move your pencil on down to the center of this great interior region, shown on the map between the Eastern and Western mountain ranges now, and you will draw a circle around the city of St. Louis as a point of great strategic value for assembling and shipping war supplies. Then note that the main stem of the vast Mississippi River system, with its 15,000 miles of ramifying navigable branches, leads straight away to the seaboard, a distance of 1250 miles, with a channel that could even under present conditions bear hundreds of thousand-ton barges without difficulty.

After encircling these strategic centers and observing how bounteously nature has supplied them with cheap routes of transportation to the seaboard, it should be clearly apparent to you that to neglect the opportunities thus afforded to relieve a pending freight congestion would be nothing short of criminal.

Having noted the advantageous geographic location of these interior commercial centers and their communication by water routes with the seaboard, the question that immediately comes to one's mind is, "Why are not millions of tons of freight being carried by these rivers now?"

The answer to that natural question is found in a number of reasons.

1st. Because of the rapid growth of our marvelous railway system and its highly efficient equipment as a transportation factor to the detriment of the obsolete waterways.

2d. Because industrial, agricultural and commercial development in America has advanced so rapidly that the American people as a nation have never had to count the cost. We have not yet experienced the need for frugality, thrift or economic efficiency as it has been learned in Germany, France and England. If the railroads could carry our freights quickly, why should we ship by water to save money when our wealth and prosperity enabled us to pay the higher cost and receive the quicker service? As a result, we have come to depend almost entirely upon the railroads for transportation and water transportation companies have been almost entirely driven out of existence.

3d. The waterways have long since ceased to be used because of the nation's neglect to completely and systematically improve them, and consequently they could not be depended upon for reliable and continuous service. Take, for example, the Ohio River. For three months in the year thousand-ton barges can ply between Pittsburgh and New Orleans and render cheap and efficient service. During the remaining nine months there is not sufficient water and no dependable service. If the \$63,000,000 needed to complete the improvement on that 1000 miles of water route had been provided in a lump sum there would now be an adequate and dependable water route with a depth of nine feet that could be used continuously.

4th. These natural highways for the cheap transportation of our low-class freights have not yet been provided with proper terminals by the cities capable of using them, and without the proper facilities for docking, loading and unloading, freight shipments by water have been made next to impossible.

5th. Perhaps the most potent reason for the abandonment of water transportation lines, however, has been the unfair rates imposed by the railroads in competition with the main water routes. This has been a grave mistake on the part of the railroads, and with the present transportation situation confronting them they begin to realize their mistake.

The war crisis has suddenly brought all of these things to our attention very forcibly, and it may be that the need for efficient and economic service under our preparedness program will bring about an appreciation of these waterways that would not have been accomplished otherwise.

There have been numerous and well-determined attempts during the last 20 years to restore navigation on these larger inland rivers, but all with one exception

up to the present time have been signal failures owing to some one or more of the causes enumerated above. It seems now, however, that sheer necessity is about to cause the problem to be solved.

Appreciating the valuable asset afforded by these great inland rivers, and realizing that the war situation would direct national attention to them as never before, a large number of the ablest business men of the larger cities on the Ohio, Mississippi and Missouri rivers gathered in St. Louis early last month to work out some definite plan for the restoration of commerce on these rivers.

Two river transportation corporations, capitalized at \$3,500,000, are to be formed for the purpose of constructing and operating boats and barges on this main system. One company, capitalized at \$2,000,000, will operate between St. Louis and New Orleans, and the other, capitalized at \$1,500,000, will operate between St. Louis and the Twin Cities.

These new river transportation companies will begin operations under conditions more favorable than those that have confronted their predecessors. These conditions are:

1st. Mitigated antagonism on the part of the railroads, because the big railroad men of today are broader and recognize the fact that bulky low-grade freights may be carried on the rivers without detriment to the railroads competing with them.

2d. The existing clause in the Panama Canal Act, which prevents railroad companies from owning and operating water craft in competition with navigation companies.

3d. The tendency of the Interstate Commerce Commission to so justly and equitably regulate railroad rates as to prevent unfair competition with waterborne commerce.

4th. The awakening of the people of the large cities along the rivers to the fact that adequate docks and wharves must be provided to accommodate water craft, if they hope to enjoy the benefit of cheap water transportation rates.

5th. The seriousness of the pending freight congestion, which makes the merchant, the farmer and the manufacturer realize that they must lend a hand now in successfully launching this new enterprise and making it successful or be left entirely without means to ship their freight.

All of these favorable conditions are going to contribute greatly to the successful launching of this new enterprise, but the one thing that will contribute most is the immediate building of docks and terminals by the cities along the route that hope to avail themselves of the water craft. Davenport, Iowa, has set a striking example to the cities on the upper Mississippi River, and doubtless many of the others have already begun to provide loading and unloading devices for river craft.

St. Paul and Minneapolis have already awakened, and one of these cities has a fund of \$300,000 ready to proceed with.

New Orleans has perhaps made greater preparation thus far than any of the river cities, and her people doubtless look forward to the return of the days when hundreds of the great barges of the "Valley Transportation Line" lay unloading at her wharves.

The city of St. Louis undertook to equip a river terminal a few years ago, and if my memory serves me right, the sum of \$250,000 was appropriated for the purpose.

Memphis has just awakened to the value of the river as a transportation asset, and has within the last few weeks, I am informed, taken steps to raise the necessary fund to equip itself with modern loading and unloading facilities.

Every city along the river below St. Louis should begin at once to build suitable wharves equipped with loading and unloading devices, so that the water traffic may be taken care of when it starts. Cairo, Cape Girardeau, Hickman, Memphis, Helena, Greenville, Vicksburg, Natchez, Baton Rouge, Plaquemine and Donaldsonville could profit greatly by beginning at once to prepare for the coming fleet of steel and wooden barges that is to ply on this great inland water route as a war necessity. There should be no hesitancy on the part of the business men and bankers of the large interior river cities in helping to raise the needed capital to build and equip these lines of barges. The investment should pay good dividends, but aside from being an investment, it must be looked upon as an insurance to keep commerce moving. Every merchant, farmer and manufacturer of



the Mississippi Valley should not only subscribe liberally toward making up the capital stock, but should, as a patriotic duty, lend his aid by shipping every pound of freight possible by the water routes. Such co-operation will not only guarantee the success of the new water transportation companies, but will contribute material aid to the Government by relieving the overburdened railroad lines of a vast amount of the traffic they will be called upon to handle during this crisis.

Moreover, the successful operation of boats and barges on the Mississippi River and its larger tributaries through such co-operation is certain to have its effect on numerous other rivers. The organization of a number of other water transportation companies will surely follow, and as fully two-thirds of the mileage of our navigable rivers serves the Southern States, no greater benefit could come to the South than such a demonstration that the waterways can be profitably and economically utilized for the transport of our commerce.

## THE PRICE OF COTTON AND SOME REASONS THEREFOR.

### A Philosophic Discussion of Interesting Problems of Prices.

By W. W. MORRISON, New Orleans.

A greater part of what the greater part of the people do is due to causes of whose existence they are not aware. Even many people whose intellect and training make them capable of analysis frequently respond to influences they are not cognizant of at the time. The cause is traceable to the delicate but indelible impression which passing events, environments and habits of thought often leave long after our apparent connection with them has passed away. This impression seems to be made on that which is spiritual rather than on that which is intellectual in us, and it is thus that we can account for the subtle and psychic character of these influences on human conduct.

It is really the reflection of the subconscious life of the world, and is, perhaps, among the more, if not the most, powerful of the forces which direct the course of human affairs. Statesmen must contend with it in normal times as well as in times of a crisis. The ability to contend with it adequately can often prevent a crisis or greatly modify the effect of a crisis when it comes. Hence, it has been this aptness in recognizing and in dealing with these deeper and somewhat mystic influences which control the conduct of man that has measured the fitness and the failure of statesmen in every age of the world.

What is true of statesmen is no less true of business men. While business appears on the surface to be entirely practical and entirely material, it is just as much subject to the subtle influences of this subconscious life of the world as those things which belong more particularly to the civic and social life of mankind. For the records of commerce bear abundant evidence that the vision to see and ability to deal with psychological conditions vitally concerns the ultimate destiny of every business undertaking. Indeed, within this kind of prescience largely reside those constructive forces which make, or the lack of which mars, the career of every business man, just as they make or mar the career of every statesman.

These subconscious impressions have always exercised a far-reaching influence in cotton affairs. In their final effect they have been steadily against cotton bringing its legitimate value. You see the market conditions for nearly two generations led the world to habitually look upon cotton not only as a low-price product, but one whose value was weakly sustained. Many times, in spite of fundamental conditions essentially strong, the world has seen prices collapse and the market demoralized from causes that some times appeared frivolous and often unjustifiable. For many years even the producers were led to believe by these immemorial habits of the market that cotton between 12 and 15 cents was dangerously high, regardless of conditions.

It is thus that cotton has had to fight its way to higher levels against the psychological effect which nearly a half-century of adversity has left. And this influence is still alive. Indeed, there are thousands of people today who cannot divest themselves of the belief

that throughout the advance prices reflected the fictitious effect of speculation rather than the legitimate effect of eliminating necessity as a factor in the liquidation of the cotton crop. In fact, the producers seem about the only class in the cotton world that has been emancipated from these malevolent influences of the past. The constructive attitude which spot cotton has steadily maintained, I take it, supports this view.

It will be illuminating to realize that the intrinsic value of cotton is not now based alone on the cost of production, but is based also on the normal relation of the price to the price of other prime necessities and to the profits on the manufactured product. Those who own the old crop and who will own the new are thoroughly imbued with these views. This, in connection with the trend of crop developments, makes it fairly certain that spots will not follow futures in any drastic decline.

A great evolution has been and is still going on in the cotton affairs. It is establishing a new level of value based on far-reaching changes in those primary conditions which affect the production and marketing of the crop. It began to be discernible something more than 10 years ago, and became rather definitely defined about four or five years ago. It involved the movement to make cotton a surplus crop, and to include with the cost of production the profits on the manufactured product as a basis for fixing the price. Its most conspicuous feature has been the independent thinking of the producer, which has made him more or less indifferent to all sensational news and to all sensational developments in the future market.

It is entirely probable that present prices and market conditions would have obtained, even had the war not intervened. At least, this is the most logical interpretation of the consistent and sustained trend of the evolution. Is it not reasonable that the steady encroachment of consumption on production, so notable during the last two decades, would have reached a very acute stage by this time anyway? And is it not just as reasonable that the producer would have been by now still stronger to enforce, and that he would have enforced a price commensurate with the acuteness of such a situation? Are not the broad and erratic fluctuations of today the natural outcome of prices being high and unusual and could have been expected under any conditions? And, after all, is not the perturbed state of the brokers and traders really nothing more than the suspicious excitement with which humanity always regard whatever is unusual, even in normal times?

Most of us are prone to lay everything to the war, and to do it without investigation. It is so easy to explain present prices and market conditions in that way. The war may have exercised some influence, but all the dependable evidence indicates that it has been only a minor influence, if any at all. The fact is, war circumscribes the movement and reduces the consumption of cotton. That has been the history of all wars, and so far it has been the history of this war. For it is fairly certain that had not the processes of the normal increase in consumption been interrupted, the world would be consuming this year around 17,000,000 bales instead of 14,000,000. That is, if the cotton would have been available. The sooner we can divest ourselves of the belief that the war has been the determining factor in present conditions, the sooner we will get a clearer and a safer view of the situation. Certainly events have demonstrated that it is the safer view.

Making due allowance for the trend of the evolution, and figuring on a logical ratio, it will take fully three times the amount of capital to handle the same volume of cotton business now that it did when cotton was 10 cents a pound. Sound business usage would have required this under perfectly normal conditions. Some traders, cotton merchants and brokers are prone to ignore what is thus obviously demanded, and others are just as much prone to exaggerate the dangers of the situation. These two extremes measure the real menace to the market. It is no time for reckless adventures, neither is it a time for nervous apprehension. We are living in a big constructive era. It is the part of wisdom to assume a constructive attitude toward each phase of the era as it develops.

It is improbable that stocks of cotton will be carried at current prices. This forecast that the producer will have to carry large amounts for indefinite periods, and that both will be greater than any of record. It will be safer to assume that he is equipped both mentally and financially for such an undertaking.

## State Action in Florida for Tick Eradication and Improvement of Livestock.

By A. A. COULT, Educational Director, Florida State Livestock Sanitary Board, Jacksonville, Fla.

An epoch in the development of the livestock industries in Florida was inaugurated this month when the State Livestock Sanitary Board was created by act of the Legislature and approved by the Governor.

Up to the present time the State Health Board has carried the responsibility of administering the livestock sanitation work from limited funds taken out of the money intended to provide for human health sanitation.

That was one reason why eradication of ticks had not been given more attention in the State, coupled with ignorance of the people as to the benefits to be derived from getting rid of the ticks. But with an appropriation of \$150,000 for the ensuing biennial period for eradicating the ticks and control of hog cholera and other animal diseases, the prospects are very encouraging for early release of large areas of tick fever quarantined areas.

The new law also authorizes the county commissioners in each county to appropriate up to two mills per annum on the assessed valuation in their respective counties for building dipping vats and co-operating with State and Federal officials in eradication of cattle fever ticks.

During May of the year 1916 a number of the leading landowners, business men and railroads organized the Florida Cattle Tick Eradication Committee of the Southern Settlement and Development Organization for the purpose of carrying on an energetic campaign of education through the press of the State and in other ways, which has resulted in arousing hearty support of the tick eradication work, and a number of the counties are now at work building dipping vats to start systematic tick eradication.

With the liberal appropriation for support of the State Livestock Board and the authority given to the county commissioners to make appropriations for building dipping vats and co-operating in tick eradication work, it looks like a short, successful war against the cattle fever ticks entrenched in Florida.

The State has millions of acres of cheap land which can grow luxuriant grain and forage crops for stock feed, and there probably are more good native grasses in Florida than in any grain belt State, with plenty of water.

It has wonderful opportunities for developing the cattle industry as soon as the ticks are eradicated, for there are thousands of cheap, native, piney woods cows and heifers on the range, which made good foundation breeding stock when mated to pure-bred beef-type males. Grain finishing of beef cattle has never been given much attention in the State, but enough of that work has been done to prove that it is profitable, and the complaint last fall among the feeders was the lack of suitable stock for feeding.

Dairying also will receive more attention as soon as good stock can safely be imported from Northern States.

One dairyman at Jacksonville, who has cleaned out the ticks on his farm, spent several thousand dollars for pure-bred Holstein cattle a few months ago. He sold a few days' old bull calf from one of the heifers for \$100 and sold the same purchaser a grade calf out of a cow which had been tick infested for \$1, although the mother of that calf cost him nearly half as much as the pure-bred heifer.

He gets as much milk from four of the pure-bred heifers as he does from ten Florida dairy cows he owns. The general wholesale price of milk in Florida is 35 cents per gallon, as the dairymen could not make a living feeding tick-infested cattle at less income.

A large dairy farmer in tick-free Dade county, who has had three years' experience with tick-free dairy cows shipped in from Northern States, has demonstrated that he can produce milk at considerably lower cost than the dairy farmers in Illinois and Wisconsin.

Exit ticks and enter better beef and dairy cattle in Florida in greatly increasing numbers as the State Livestock Sanitary Board gets to work!

British Board of Trade Labor Gazette reports increase in retail food prices since July, 1914, of 90 per cent. in beef, 162 per cent. in bacon, fish 138 per cent., bread 97 per cent., milk 61 per cent., eggs 78 per cent., and potatoes 142 per cent.

# Quicksilver Industry of Texas

## Susceptible of Large Expansion

By WM. B. PHILLIPS, Mining Engineer, Houston, Tex.

The total value of the quicksilver produced in Texas since the beginning of the industry, in 1899, now exceeds \$3,500,000. During its entire history the industry has been confined to a comparatively small area in the southern part of Brewster county, from 90 to 100 miles south of Marfa, Alpine and Marathon, on the Southern Pacific Railway. In the earlier days the chief railroad town was Marfa, but during the last years Alpine and Marathon are the towns from which freight is hauled in and to which the quicksilver is brought. All hauling from and to the railroad is done by wagons, the ordinary rate being from 50 to 60 cents per 100 pounds.

While some native quicksilver has been found, yet by far the greater production has been from cinnabar (sulphide of quicksilver), a deep red-crimson ore that occurs in limestone, in a bituminous shale and in an igneous rock, such as trachyte and rhyolite. Up to a few years ago the larger production was from the cinnabar in the limestone, but of recent years the shales have yielded the greater part. When the D-shaped retort was used in distilling the metal it was not uncommon to obtain quicksilver, a combustible gas and oil from the same charge, but this practice did not long survive, as the retorts required much richer ore than the ordinary Scott furnace.

In commercial practice the ore is crushed and charged into a brick stack which is provided with staggered shelves from top to bottom. This stack is heated by a wood fire, and discharges into a series of brick chambers into which all the smoke and fumes go. These brick chambers are the condensers, and in them the quicksilver distilled from the ore as a fine mist is brought into the condition of the ordinary quicksilver of commerce. There is no smelting or melting of the ore. The heat is sufficient merely to allow the decomposition of the cinnabar and its change from the sulphide to the metal. The condensing chambers have to be made with great care, for quicksilver, although it is nearly 14 times as heavy as water, will go wherever air will go, and there are considerable losses due to the escape of the metal as a fine mist through joints, cracks, etc. The condensing chambers have sloping floors, and the metal drains down these floors and to a small plugged opening in an iron door. It flows through this opening, at intervals, and into a cement trough communicating with a cement tank in the general collecting-room. Here it is ladled into wrought-iron bottles holding 75 pounds net and provided with a screw cap. These bottles go into the trade and are collected by some central agency and returned to the mines. All kinds of marks and devices are to be seen on these bottles, for they come from all over the world, from Austria, Spain, Mexico, China, Japan, etc.

Once in so often, depending on the richness of the ore, etc., the condensing chambers are opened and a man goes in with a heavy broom and sweeps the rich soot down to the door. This soot hangs on the walls of the condensers and does not give up its quicksilver until it is slowly heated on an inclined iron plate in the air. This part of the business occasions severe cases of salivation now and then, for it is practically impossible to prevent the inhalation of the fine metallic mist when sweeping down the condensers.

Geologically, the quicksilver ores in Brewster county occur in two principal horizons, the Eagle Ford shales of the Upper Cretaceous and the limestones of the uppermost members of the Lower, or Comanchean, Cretaceous, especially the Washita limestone. To within a few years ago practically all of the metal produced came from the limestones of the Lower Cretaceous, but of recent years the Eagle Ford shales of the Upper Cretaceous have been the chief sources of supply.

In a general way the Terlingua quicksilver district is divided into two great groups by the Long Draw (Vogel's Draw), which runs from north to south. On the west side of this draw are the limestones of the Lower Cretaceous and on the east side are the shales, etc., of the Upper Cretaceous. This draw marks the approximate course of a fault that has brought the Lower Cretaceous a good way up from its normal position.

There seems to be no doubt that igneous intrusions

have had a good deal to do with the occurrence of quicksilver ores in this district, especially at California Hill and at Study Butte and Maverick Mountain, but it is still uncertain just what effect they have had and to what extent mining conditions have been involved. The richer and better ores have not been obtained directly from igneous rocks nor from the limestones and shales in immediate association with them. At the same time, the effect of juxtaposition with such intrusions is fully sustained at certain typical localities.

But this article does not deal with geological conditions. It is for the purpose of pointing out that the Texas quicksilver deposits are fully capable of a much larger development than they have had up to this time. Instead of an output valued at \$300,000 or \$500,000 a year, they could produce a million dollars' worth of quicksilver every year for a considerable time without being seriously impaired.

The average content of quicksilver in the Texas ores has been a good deal higher than in the California ores for several years, and there is no reason why the costs of mining and production in the two States should show to the disadvantage of Texas. There is a longer haul from and to the railroad, and the costs of living and of administration may be higher, but it does not appear that they are sufficiently high to offset the better grade of the Texas ore. The content of quicksilver in the Texas ores, mine run and furnace analyses, is nearly twice as high as in the California ores, being from 1 to 1.10 per cent. as against 0.50 to 0.60 per cent. Allowing that the recovery is relatively the same, this means that one ton of the Texas ore will go as far as two tons of the California ore.

There is now an excellent opportunity for the enlargement of this industry in Texas. Quicksilver is in active demand, and is likely to continue so for an indefinite period, certainly until after the close of the war.

The writer's acquaintance with the district began in 1901. He opened and equipped one of the most successful mines now in operation, so that his knowledge of the conditions there has been gained from much experience. It is his deliberate opinion that the productiveness of the district can be much enlarged, and profitably so. The improvements that have been made in furnace design and construction during the last years enables one to work at a profit ores that could not have yielded a profit ten or even five years ago.

### SURVEY OF SOUTHERN TOBACCO SITUATION.

#### Lack of Potash Not a Controlling Factor in Quality or Yield of Crop.

Danville, Va., June 18.—[Special].—R. L. Dibrell, president of the Danville Tobacco Association and also chairman of an active good roads committee, has just issued an interesting survey of the Southern tobacco situation, in so far as it relates to the bright belts. Last season the three bright tobacco districts yielded a tremendous quantity of leaf from Virginia and North Carolina, the old belt of Virginia and North Carolina producing 147,826,595 pounds, Eastern North Carolina 122,914,757 pounds, and South Carolina 20,079,903 pounds, making a total of 290,821,255 pounds, which sold at a general average of \$18.54 per hundred pounds. Danville alone handled 69,000,000 pounds, this figure including loose-leaf sales and tobacco shipped for rehandling.

An interesting fact has been brought out by Mr. Dibrell as a result of his investigation of the market, and that is that despite the lack of potash in the fertilizers, which it was impossible, because of the war, to procure in normal quantities, there was a good yield of full average quality, if not better. Potash, it seems, is not, after all, such a factor in making a good crop as has hitherto been supposed, for it has proved that the 1916-17 crop is a good burner and smokes sweet and cool.

Mr. Dibrell finds a forecast of the 1917-18 crop

hard to make under existing circumstances, and he deems it imprudent to make any surmises as to marketing. In the far southern part of the bright tobacco section, which raises from 10 to 15 per cent. of the bright tobacco production, a full crop has been planted under favorable conditions and promises well at the present time. There has been about a 10 per cent. increase in acreage in this section, and in Eastern North Carolina a full average crop has been planted under favorable conditions and there is a 10 per cent. increase in acreage.

In the old belt planting has been late, and while the crop there is as large as the planters can properly take care of, it is doubtful if there is a larger acreage this year.

A quotation from Mr. Dibrell's report casts an interesting reflection on the trade generally. He says:

"That there is a shortage in the world's supply of leaf tobacco of practically every growth is an undisputed fact, but what effect the war and the various legislations growing out of it is going to have on consumption, developments and circumstances can only determine. Great Britain, our principal foreign customer, has increased its already high import duty on leaf 50 per cent., making the tax on every pound of raw tobacco cost \$1.76, to which has to be added the high cost of the leaf, freight from 500 to 700 per cent. higher than normal, excessive war risk and marine insurance, and other expenses incident to the war. On May 31 all licenses to import leaf into Great Britain expired, and it is very uncertain when exports to that country will be allowed to resume."

Another factor which renders uncertain next year's tobacco business is the increase in the internal revenue tax in America on all manufactured tobacco products by 100 per cent. Local tobacco men who have been to Washington consider it a foregone conclusion that the bill will become a law with a few minor changes.

The prospects of good prices for the planters is considered good, for while the shortage in the world's supply is great, the consumption of tobacco is increasing, and it is considered more than probable that it will take several bumper crops to depress prices materially. The entire production of bright tobacco is only a very small percentage of the world's annual consumption of upwards of 2,000,000,000 pounds.

### But How Will He Get "International Peace" While a Murdering Nation Seeks to Overrun Civilization?

W. A. ANDREWS, Opelika, Ala.

Where's he "AT?" "AT" Opelika, "IN" Alabama. "OF" the UNITED STATES, where he was born and raised, "IS" a Democrat, both Nationally and Internationally, from his "belly" to his "backbone," "IS NOT" in favor of the War, "NEVER WAS" and "NEVER WILL BE," "DOES NOT" agree with the MANUFACTURERS RECORD's position in regard to the War with Germany, "Does not" believe that the "PRESS" should, with her GREAT BLACK HEAD LINES, fan the prejudices of the People to go to War for "DEMOCRACY" until we have "swept clean before our own Democratic Door." When Kaisers, Kings, Emperors, Presidents, Editors and those who "make wars" go to the Front, regardless of position or Age, the Nations of the Earth will learn that "WAR IS HELL," and "maybe" we will all learn that "INTERNATIONAL PEACE" is Heaven. Say, Mr. Editor, "tote fair now," and let's be straight with each other. If you publish any of this, publish it all, and don't take any advantage of men, and if you will do that, and President Wilson and you go to the War, I may change my mind and "throw up my hat" and "go to it" with you, even if I am 67 years old.

### Limekiln Outfits Wanted.

WESTERN WHEELED SCRAPER CO., Aurora, Ill.

G. H. Copeland, contractor, Calle Damas 186, Tampico, Mexico, has asked us to put him in touch with manufacturers of limekiln outfits, stating that he desires to install a continuous oil-burning kiln of a daily capacity of 20 tons. You can give this information to manufacturers who will give our correspondent the information desired.



## Patriotism and Plowing

By ANDREWS WILKINSON, New Orleans, La.

In the present crisis the South has been rather unjustly blamed by national food supervising authorities and the Northern press for not producing sufficient staple food crops with its fabric and a few other manufacturable and exportable productions. It has been thus estimated to spend annually between \$700,000,000 and \$1,000,000,000 for bread and meat grown in Northern and Western States. But, at the same time, it is credited with producing annually a 13,000,000-bale cotton crop, worth, with its cottonseed, more than \$1,000,000,000, and no consideration is given to its cane-sugar crop of 600,000,000 or 700,000,000 pounds; its cane-syrup crop, that now supplies a large part of the country, or its great early vegetable crops, which furnish millions of the North with green food through three months of the late winter and the spring, or of its abundant citrus fruit crops, consumed mostly in Northern States.

In regard to cotton, the States producing it have had only a sufficient labor and team supply to produce a full crop for this country's and the world's demand. The Southern cotton growers would have been glad enough to have a sufficient labor and mule supply to produce all of their human and animal foodstuffs at home. But it has been at least a very debatable question in the line of political economy whether it were not more profitable to raise a full cotton crop on the acreage covered by their limited labor and mule supply and purchase cheap flour, corn and meat at, probably, a less cost than such foods could be produced at home. Whether this policy were right or wrong, it gave a tremendous impetus to interstate trade, kept all of the money involved in this country, and made the Southern cotton crop vastly beneficial to both sections.

Now, with the relative values of bread and meat and cotton, it is not debatable as to whether it is better to depend on exterior States for the food supply, or the bulk of it, in the cotton-growing States. It is true that the South will be compelled to feed itself, and it will probably produce a surplus under the spur of dire necessity. But if it does so it must be done at the cost of a considerable part of an average crop, just because there is still an insufficient labor supply and team power in the cotton States to produce a full cotton crop and a full food crop at the same time.

Within the past 12 months more than 250,000 negro laborers have emigrated from the cotton States to seek employment in the Northern States. A large part of this labor element has been taken from Southern towns and cities, but much the larger part has left Southern field work. Since the present great war commenced there has been no notable increase of mule-power in the cotton States. The enormous increase in the value of mules commenced with the British Boer War, in 1900, when many thousands of them were exported to South Africa. Since 1914 many more thousands have been sent to the embattled armies of Europe. Comparatively only spasmodic efforts have in the meantime been made to raise mule stock in the Southern States. Consequently, there are not enough working stock and laborers left to produce more than a small part of the great food crop that might otherwise be grown on Southern soil.

While all the South is full of patriotism and anxious to advance and protect our great country's interest, through military service and agricultural labor, it is woefully deficient in plowing power. It has largely depended on the negro and the mule to produce its leading staple crops, and perforce neglected growing food crops. Its field negroes are being tolled away into the Northern States by the hundred thousand, and its mule-power has not increased during this exacting world war demand for American working stock.

Then it comes to this: Southern plowing, to keep pace with Southern patriotism and with all of our country's pressing demands, must be largely done by modern motor plows under expert control, as it is being mostly done in every other productive section of the country. If it be done, and it will surely be done in a short time, it must be under expert control. The Southern negro is unable to rise superior to the mule, and the average unlearned white laborer has not the capacity to handle or comprehend the modern gasoline traction engines necessary to profitable or successful motor plowing.

In the sugar region of Louisiana, in which the present

writer is a resident of long experience in field and factory work, for several years various makes of motor plows have been employed, mostly in breaking up lands preparatory to cane cultivation, and to a less extent in actually cultivating the growing cane and corn crops. A large proportion of such machines have failed because the negro and white cane-field labor, mostly ordinary mule plowmen, have been too stupid and clumsy to handle them, and they soon send them to the plantation junk pile. In all cases where such machines are handled by intelligent and competent mechanics they have been very efficient and superior in results to mule results. A few days since one of our most prominent sugar planters suggested a reasonable plan to make motor plowing generally successful in the Louisiana sugar region and all over the South. The planters who have so far used them bought only one, two, three or four, not enough to justify the steady employment of a high-class expert at high wages in charge of all of them. Now, few modern sugar planters work less than 100 mules in their fields, of which the initial cost is more than that of 25 motor plows, and the feeding expense much greater than the motor's fuel. Now, it would be profitable to pay a motor-plow expert at least \$5 a day and his board to have permanent charge and keep in working order gangs of six, eight or ten of such motor plows working in groups, just as the mule-plow gangs of the plantations are worked together under the direction and control of a well-paid overseer.

This same policy could be pursued by community farmers, each of whom need but one or two motor plows, with one general expert employed to attend and direct as many machines as he could supervise and keep in order.

A few days since the writer of this article rode through several thousand acres of rich sugar lands in one small parish, lying idle and weed-grown, which were thrown out of cultivation in the crisis of the sugar industry between the last Presidential election and commencement of the world war. The labor and mule-power that worked them were lost at the same time, and have not yet been restored in the present renaissance of the sugar industry.

All over our Gulf States are millions upon millions of acres once in cultivation lying idle for lack of labor and plowing power to cultivate them. The loss of the labor could be much more than made up for by the application of expert motor-plow cultivation.

As it is, every man, woman and child, mule, horse and ox available are doing what they can to increase the Southern food supply. A wave of farming and gardening enthusiasm has swept all over this section, and even the fair dames of the City Card Clubs have mostly adjourned to extemporized backyard gardens and made spades permanent trumps.

But Southern patriotism could be far more effective with sufficient plowing, and the most of those many million idle acres in this section must remain idle for at least another year, until modern motor plows are made to take the place of missing mules and negroes and intensive and diversified cultivation supplants the shiftless and neglected one-crop cultivation characteristic of the lately and largely vanishing negro labor and the unscientific methods of much of the white farming.

As it is, the usual annual food crop shortage in the South will be very much diminished or perhaps even disappear this year, and economy under the compulsion of high prices will greatly diminish food consumption. Finally, the Government as a war measure may have to meet the issue by taking control of the vast acres of idle or wasted lands in the Southern States and having them properly cultivated and turned to good account.

One certain result of this great world war will be the more intelligent and intensive cultivation of the Southern States or the cotton States in particular. With the development of cultivation in this section like that of Belgium, Holland, France and Germany, the South might feed this entire country and let the North turn entirely to manufactures. But it never could nearly feed itself when it stuck to the methods of the negro and mule field combination. It cannot now be made to "laugh with a harvest through tickling with a hoe." It must be plowed deep with mechanical plowing for the

making of a new and more fertile soil. Now, to produce and vastly increase its food and staple crops, it must look more for its plowing power toward the motor-plow manufacturers of the North than to the mule pastures of Kentucky and Missouri.

### The Farmers of the South Must Get Prices That Justify High Farm Wages.

S. B. TANNER, President and Treasurer the Henrietta Mills, Caroleen, N. C.

I received the MANUFACTURERS RECORD of the 24th ult., containing your excellent defense of the South "against the charge of not raising enough food crops."

Along this line would say that I have seen farmers return to their farms from Southern towns with wagon-loads of corn for which they could not find a market at 40 cents per bushel, at which price they could not even buy clothing for their families, not taking into consideration any other necessities of life.

The truth of the business is that the Southern planter cannot afford to produce any more grain, in competition with the great grain-raising States, than he needs for his own consumption, as his money crop in this section is naturally in cotton and truck products.

You struck the keynote when you referred to the wages paid on farms in this section. How can the world expect farm laborers to continue furnishing cheap food and clothing by laboring 14 hours per day at the hardest kind of labor for 50 cents to \$1 per day, and in many cases only get pay after the crop has been gathered, or once a year, while our politicians are insisting upon an eight-hour day for all other kinds of labor, payable weekly, at \$2 to \$4 per day, most of which requires less exertion, exposure and risk than farming? Consequently, the best farm laborers have left the farms for the shorter hours and greater pay of the city, and still we wonder why the cost of living is higher and the supply smaller.

It is evident that if all other industries work shorter hours and at the same time get increased pay that the farm laborer must have the same treatment or the Government will have to subsidize him in some way, as farming is a hazardous business at best, depending altogether on the distribution of rain, snow and temperature, while all other industries can be figured in advance, based upon actual cost and an established production.

### Are High Prices of Lead Justified?

A MANUFACTURER, Atlanta, Ga.

Your paper has been doing some splendid work in offering suggestions for improvement along various lines of industry and calling attention to the actions of some Government representatives that looked very irregular, and asking them for some explanation (Mr. ———, for instance), but if he has explained I have not heard of it.

Now, the Guggenheims, as we all know, control the lead industry in America, and lead is almost as much of a necessity as bread and meat. They have continually and steadily advanced the prices on lead for the past three years, and not a word in condemnation have I heard. Is there any reason for such an advance in the price of lead? Not a single reason, only demand. How much longer will the people stand for their representatives to go to Washington and draw a good fat salary to look after their personal interest first, last and always, and neglect the interest of the people and permit such corporations as the National Lead Co., controlled by the Guggenheims, to extort millions upon millions of dollars over and above a liberal return on the capital invested? This is an outrage, and the legislators and the lead combine both should be severely dealt with.

I hope you will look into this outrage and see if some relief cannot be had. Do not use my name, as my business could be greatly injured.

[The writer of this letter says the only reason for the advance in lead has been the demand. Usually that is accepted as a sufficient reason for advancing prices, and if our correspondent found the demand for his product steadily exceeding his output, we imagine he would raise his prices, too, but we give his letter for whatever good his views may accomplish.—Editor MANUFACTURERS RECORD.]

# Substitutes for Wool Urgently Needed

By RALPH H. BUTZ, Allentown, Pa.

The textile manufacturers of the United States are almost unanimous in expressing a desire that the Government help them in finding a good and practical substitute for wool, and also to help them solve the various problems that have developed as a result of the acute shortage of wool, due to restricted imports and curtailed production in North America. The almost prohibitive prices obtaining for wool at the present time also lend seriousness to the situation in which the manufacturers find themselves.

While it is probable that the imports of wool will increase after peace has been restored, and that prices will again recede to a lower level, still it is doubtful whether the situation will be improved to such an extent that the woolen manufacturers will be relieved to the extent desired. For several years prior to the beginning of hostilities in Europe the lessened supply and consequent increase in price of wool caused not a little concern among the textile manufacturers. Now that conditions have become almost intolerable, many manufacturers are closing their mills, and unless relief is to be found in the near future the industry will suffer tremendous losses.

A number of textile men are confident that a satisfactory substitute for wool can be produced if a concerted effort is made in this direction by all the textile manufacturers in co-operation with the Government experts. It has been proposed that one of the most effective means would be to call a textile conference, which should be held under the auspices of the Government, such a conference to be attended by textile manufacturers in the various branches, and also by men representing the textile machinery trade. The branches of the Federal Government to be represented at such a conference would be the Department of Commerce, the Department of Agriculture and the Bureau of Standards.

The campaign for more sheep among farmers and ranch owners has created considerable interest, and there is no doubt that the wool production will be increased to a certain extent as a result of this campaign, but even under the most favorable circumstances the annual supply in this country will be far from sufficient to meet even the most urgent requirements. There are certain economic conditions in the United States which have a tendency to discourage the sheep-raising industry. The most important of these is the fact that the supply of cheap grazing land for this purpose is diminishing every year. And when sheep are raised on land that increases in value there is little hope that the price of wool will not increase in direct proportion. Furthermore, the rancher and the farmer will not engage in sheep-raising when they can direct their efforts in more profitable channels.

The Department of Agriculture has been making extensive investigations for a number of years, and has important data available concerning fiber products that might be used in the manufacture of textiles, also the best methods to pursue in planting and harvesting, and the location of land suitable for the purpose.

In commenting upon the present situation and the benefits to be derived from a conference, such as has been proposed, Mr. James Chittick, a well-known textile specialist, made the following statement:

"In Australia, Argentina and this country the area of free grazing land or land that is cheap is growing smaller year by year, and although the number of sheep may be increased, it is certain that the cost of growing sheep will advance with the loss of free or cheap land. Consequently, we may look for a gradual increase in the average cost of wool.

"The woolen manufacturers have recognized the necessity of effecting combinations of wool with other fibers in order to keep down the cost of their product. Wool has been combined with cotton in various ways, by combing the fibers together, by plating, twisting, and so on. These combinations, however, have not always been made after careful investigation, the woolen manufacturers going about this work in the spirit of willingness to 'try anything once.' Of course, the best results have not followed such haphazard methods, and it is even quite fortunate that success has come in a number of instances without the proper sort of experimentation.

"With the cotton man giving his knowledge and experience to the woolen men, and vice versa, much more

certain progress could be made in finding lower-priced and more plentiful materials that could be used in place of those that cost so much and are so scarce.

"People are accustomed to think of hemp as something used only for making ropes, and yet when this fiber is sufficiently refined, costly laces, voiles and fine fabrics can be made of it. Manila hemp is coarser than Italian hemp, but when the fibers are separated and processed to bring them to the proper degree of fineness they can be used for making most delicate fabrics. There is plenty of land available in this country for hemp-growing.

"Take the case of the linseed-oil industry. In the Northwest there are large quantities of broken flax discarded and destroyed because no use has been found for this product once the seed has been removed. Yet from a combination of wool and flax tow, which is the material left after the long fibers have been removed, a good serviceable yarn has been produced.

"There is ozone, made from the swamp milk weed. The fiber of this plant is strong and serviceable, and fabrics made from it are said to be fully as high grade and as satisfactory as those made from silk or wool. The cost of the long fiber at present is too high for use as a substitute, but the tow could be utilized with wool to advantage. In fact, one of the leading textile makers has produced a satisfactory cloth from a mixture of 70 per cent. ozone and 30 per cent. wool.

"There are many animal hairs which might prove satisfactory to the needs of the textile manufacturers, concerning which little is known but the names, sometimes not even that.

"Wool has proved to be the most satisfactory clothing material because it possesses certain virtues over other materials. It is a very poor conductor of heat, and the curling of the fiber forms air spaces that add to the heat-retaining quality of the fabric made from it.

"Everyone is familiar with the principle of the double window. The conductivity of air is small and the space between the windows serves to prevent the cold or heat, as the case may be, from entering. The same principle applies to the woolen fabric, the air spaces formed by the curling fibers keeping out the cold. For this reason wool has always held the first place as the fiber best adapted for fabrics. Other fibers, such as cotton or hemp, are flat and stringy, and do not curl. It might be said in this connection that two pair of cotton hose put on one over the other will serve to keep in the heat, and the double fabric type of underwear has also been designed on the principle of the air space keeping out the cold.

"It is not at all unreasonable to suppose that some way may be found to process certain fibers so that they may possess this wool-like quality. A meeting of experts and authorities from all branches of the textile industry, in my opinion, would mean a great deal toward bringing out valuable ideas and suggestions concerning the materials now in use and those that might be employed as substitutes. It would be much better in the present emergency to investigate what is available than to experiment blindly with new materials. The work of finding substitutes not drawn from our present resources may come later, but the start must be made with what we have handy to our purposes."

## Potash from California Kelp.

J. W. TURRENTINE, in Charge of United States Department of Agriculture, Experimental Plant for the Extraction of Potash from Kelp, Summerland, Cal.

I have had the pleasure of reading your communication to the New York Times under date of the 26th ultimo. I feel sure that you will be interested to know that the Bureau of Soils of the United States Department of Agriculture during the past six years has been actively engaged in exploring for domestic sources of potash. I believe that the development which you record in your interesting article is in good part the result of the work of this organization.

For normal conditions of the potash trade we have had the feeling that the giant kelps of the Pacific coast have presented the best opportunity to establish a pot-

ash industry. Working on that supposition, we asked Congress to appropriate a sum of money which would make possible the demonstration of the feasibility of the extraction of potash from these marine algae. Our efforts in this direction were crowned with success last summer, when Congress appropriated \$175,000 for such work. In the meantime, the situation created by the European war made it possible for all known sources of potash to be developed. Many of these, of course, will have to be abandoned immediately on the restoration of competition with German potash. In general it may be said that only those sources which make possible the production of valuable by-products will be able to compete. Among these is kelp, and it is with the idea of developing by-products that our present endeavors are being made.

The bureau is now constructing its experimental plant at this place, and hopes to be operating by the first of August. The capacity of the plant will be about 200 tons raw kelp per day. It is proposed to improve, if possible, present methods of rendering kelp, and at the same time to develop others which will admit of complete by-product recovery. All data finally will be obtained on the factory scale, so that it will be immediately available for the use of the American public.

## Developing Graphite Deposit in Texas.

CEYLON E. LYMAN, President the Wakefield Iron & Coal Land Improvement Co., Minneapolis, Minn.

We are continuing the development of a very large graphite deposit which we were working on last year in Llano county, Texas, and it is proving to be a large and rich deposit extending over an area some two miles long and embracing several veins, some of which run from 50 to 150 feet in width. Assays from these veins run from 12 to 35 per cent. in graphite carbon.

We are not doing anything in manganese at present, owing to the distance from a railroad, although we may do some work to determine the extent of one deposit in view of the possible wants of the Government. In this course we may be influenced by a report recently made by a representative of the Government, who pronounced it a very large and remarkable deposit.

## For 4000 Tons Daily Capacity.

Four thousand tons is the daily capacity planned for the additional developments which the Solvay Collieries Co., general offices at Syracuse, N. Y., will undertake at Welch, W. Va. This new development will be known as the Exeter Colliery, and the main hoist shaft will have four hoists, two working from the Pocahontas No. 3 seam and two from the Pocahontas No. 4 seam. The acreage available is 1700 for each seam, and the construction of shafts will begin within 30 days, with the intention of completing all the improvements and having the complete equipment of machinery installed within the next 12 months. The location is near the Harvard, Warwick and Orkney collieries of the company, but will necessitate the construction of another mining town with dwellings, stores, offices, water supply, electric lighting, etc. C. C. Morfit is superintendent at Welch.

## Plans Annual Output of 800,000 Tons.

By next January the Burneagle Coal and Coke Corporation contemplates completing the installation of four plants with an annual capacity of 800,000 tons of coal, for the development of 3923 acres of coal land in Logan and Mingo counties, West Virginia. Electrical mining equipment will be installed and by-product coke ovens will be constructed, but the oven details have not been determined. The Burneagle company was recently incorporated with a capitalization of \$1,000,000, and its officials include James E. Walker, president, with offices at Roanoke, Va.

H. A. Varner and F. M. Varner of Houston, Tex., and L. E. Stenger of Dallas, Tex., have incorporated the Houston Waste Mills with \$10,000 capital. This company has leased buildings and will remodel them preparatory to the installation of machinery to manufacture cotton and woolen waste for railroads, machine companies and others. It will install the electric unit system for power.



# The Iron, Steel and Metal Trades

## STEEL MARKET IN EXCITED CONDITION.

**Large Steel Mills Now Out of Market—Prominent Plants Scour Iron Markets in Vain—Government to Purchase 12,000,000 Tons Steel—Pig-Iron Now Higher Than During Civil War.**

New York, June 18—[Special.]—The steel market was in a somewhat excited condition last week, to which many unusual circumstances contributed. The volume of buying of steel products was restricted still further by the inability of the mills to offer anything like early delivery. The unfilled tonnage statement of the United States Steel Corporation for May showed a decrease of 206,492 tons, and this month will probably show a still greater decrease. The Corporation's subsidiaries are practically out of the market, except for sales to regular customers and in connection with the war. Prominent mills scoured the iron market last week for steel-making iron with scant success. Though they succeeded in placing some substantial orders, they were not sufficiently covered or assured, although they also gathered in all the scrap that they could obtain.

The attitude of the majority of the mills as to making sales is made still more conservative by the fact that they are to receive orders from the United States Government this year that will call for from 10,000,000 to 12,000,000 tons of rolled steel products, which must take precedence above all others. In 1916 between 15 and 20 per cent. of the steel output was exported to the Entente Allies, or was consumed in making finished goods for them, and with the Government now handling the purchases the proportion will undoubtedly be larger this year.

The effect upon the general market of such heavy buying at special prices below the regular market cannot be foreshadowed. In some circles it is thought that the market will tend to conform to the level established for Government steel, while in others it is thought that the market will be forced higher. Present indications are that the market will go considerably higher, on the basis of the pinch being transferred from the matter of finding capacity with which to make steel to the matter of finding raw materials with which to supply the steel-making capacity. It is a condition that has been predicted by some market statisticians for a long time past. The prediction was first heard in 1913, when the erection of steel-making units was outrunning the erection of blast furnaces. Rather than have idle capacity, the steel-makers concerned would presumably pay for raw materials the value of steel minus the cost of conversion, for irrespective of profits it would be better to preserve organizations than curtail operations.

In billets and sheet bars there were some transactions last week at advances of \$5, sales taking place at \$95 and \$100 for billets, and \$105 and \$110 for sheet bars, while forging billets were sold at \$125 and \$135.

The sheet-bar market was quieter, having eased off since the active buying that sent prices up from \$75 to a maximum of \$105 and \$110. Most of that buying was by sheet consumers who intended to have the steel converted into sheets by sheet producers with idle capacity. The billet market has narrowed in point of tonnage, and it is certain that the minimum of the market for steel to be made for specified sizes has been \$90 for some time past, and this price, or higher, has been paid by consumers who are on good terms with the mills from which they have bought. The sheet market is difficult to quote with any degree of accuracy, as there are very few sellers and a great divergence in the urgency of buyers. The mills are withdrawing from the market generally, and those which remain sell chiefly for the effect of the individual sales just to hold the trade or establish future business.

It is estimated that nearly 3,000,000 tons of steel bars, plates and shapes are already under contract by the United States Government for the building of ships, cars and locomotives. In this connection it is of interest to note that, according to the reports of the United States Shipping Board, 537 merchant steel ships of an aggregate of 2,039,261 tons were under construction in American shipyards on May 1 of this year. This does not include, however, any contract let by the Emergency Fleet Corporation, which has since reported that 104

steel and wooden ships have been ordered. For the merchant ships under construction it is estimated that about one-third of the steel required, 226,600 tons, has been delivered, and that the steel mills are still obligated to deliver 454,000 tons of plates and shapes. The Navy Department has ordered 300,000 tons of steel for war craft, and the Emergency Fleet Corporation will require upwards of 1,000,000 tons to carry out its program.

Advices were received last week from Eastern and Central Pennsylvania steel centers of extensive inquiries for tank and ship plates, which it may be difficult to place, in view of the congested state of the mills. The result has been to increase the cost of marine shapes in addition to the plates. Warehouse prices of plates and sheets have been advanced \$10 per ton in the Central West, but it is notable that even warehouse prices at Chicago are 1 to 2 cents a pound lower than mill prices in the East. Chicago warehouses are now asking 7 cents per pound for tank plates, 8 cents per pound for No. 10 blue annealed and for No. 28 black sheets, and 10 cents a pound for No. 28 galvanized sheets. An advance of 5 cents over these prices prevails at St. Louis, and an advance of 10 cents at St. Paul.

Orders for American and French railroads, which will include about 10,000 freight cars, will be placed by the Transportation Division of the Council of National Defense this week. These orders will require a very heavy tonnage of plates, shapes and bars. To this amount must also be added pending contracts for a great number of freight cars for Russia, which, in turn, will consume upward of 180,000 to 200,000 tons. All the car and locomotive shops in the country are busy to capacity, and American roads, notwithstanding the high prevailing prices, are placing orders for as much rolling stock as they can induce the shops to undertake.

Wire manufacturers are being pressed to accept larger orders from domestic consumers, both large and small, who are complaining bitterly that they are not receiving enough material to fulfill their contract obligations. The American Steel & Wire Co. shipped about 190,000 tons of various wire products last month, but booked orders for scarcely 100,000 tons from domestic consumers. Although the largest interests are accepting no contracts from the manufacturing trade, they are taking current orders at the rate of probably 150,000 tons per month from domestic consumers alone. The export demand is heavy, especially for wire nails, but this month's foreign business will probably fall considerably short of the orders booked for May, which amounted to between 45,000 and 50,000 tons, including the large contract taken for Italy. Canada continues a consistent buyer in the market for wire rods, and several thousand tons have been reported sold at the mills recently.

The wire market is narrow in point of tonnage, but wide as to prices. The spread in quotations is greater than the extreme range of prices in the past 10 years with reference to the different class of business produced by the mills. Between 1904 and 1911 the minimum on rails was \$1.50 and the maximum \$2.25, or 75 cents difference. Now the American Steel & Wire Co. has an official price of \$3.20, at which it has booked some business, and even a little at \$3.50, while some independents have quoted as high as \$4 to chance buyers or for export, making a range of 80 cents. The regular settling price of independent mills with regular customers is \$3.50 to \$3.75, and that may safely be regarded as the market price. Washington reports that the Government will require 192,000 kegs of nails for building cantonments to be delivered within the next four months. Last year's production was at the average rate of 1,420,000 kegs a month, so that 192,000 kegs in four months would be 3.4 per cent. of the output.

Merchant sales of pig-iron since June 1 have aggregated about 200,000 tons, more than half of which was steel-making iron sold to steel companies in the Pittsburgh district. The active buying resulted in an advance of \$3 to \$5 per ton. There were sales of both foundry and malleable iron at \$53 valley last week, this being the top of the market, but \$50 iron does not seem to have disappeared. Prices on these grades depend largely on the nature of the order, while Bessemer and basic show practically no divergence, basic being \$50 and Bessemer \$55.

Sales of pig-iron in the local market last week amounted to 25,000 tons, including 10,000 tons basic

for export. Domestic consumers in the Eastern district were more reserved than for several weeks, but foreign buyers were more inclined to follow the market upward, paying \$1 to \$2 higher than domestic consumers have recently paid. Manufacturers of saddlery hardware and of machine tools in Connecticut purchased several thousand tons of charcoal iron for this year's shipment, paying \$50 a ton at Michigan furnaces. Canadian car manufacturers came into the market for 3000 tons of malleable Bessemer for shipment to Montreal.

The advance of \$15 a ton in pig-iron in three months was said in the iron trade last week to be unprecedented in the history of the industry. The upturn was made all the more remarkable in that half of the rise from \$35 to \$50 a ton, or higher, occurred in 10 days. No one in the trade has ever known such a market before. All records have been broken. Even Civil War prices were not as high as they are today. As a prominent dealer said: "Never in the experience of the trade has such a large and eager demand for iron been known as exists today." Consumers are paying no attention to prices. What they want is iron, cost what it may.

### (Dealers' average buying prices for gross tons.)

Bessemer billets (nominal).....	\$35.00—\$100.00
Open-hearth billets (nominal).....	35.00—100.00
Open-hearth sheet bars.....	105.00—110.00
Bessemer sheet bars (nominal).....	105.00—110.00
Forging billets.....	125.00—135.00
Wire rods.....	90.00—100.00
Rails.....	60.00—61.00

### (Dealers' average buying prices for pound lots.)

Tank plates.....	\$7.00—\$8.00
Steel bars.....	4.00—4.50
Refined iron bars.....	4.25—
Steel hoops.....	4.50—5.50
Cold-rolled strip steel.....	7.50—
Sheets, No. 28 gauge.....	7.50—8.00
Galvanized sheets.....	9.50—10.00
Wire nails.....	3.50—3.75
Cut nails.....	3.50—3.75
Plain fence wire, base.....	3.45—3.70
Barb wire, galvanized.....	4.25—5.00
Railroad spikes.....	4.00—4.10

### PIG-IRON.

Bessemer, Pittsburgh.....	\$35.95—
No. 2 foundry.....	50.95—53.95
Basic, valley.....	50.95—
Gray forge.....	50.95—
Basic, Philadelphia.....	45.00—48.00
No. 2 foundry, Northern.....	47.75—48.75
Low phosphorus.....	80.00—82.00
No. 2 foundry, Buffalo.....	48.00—50.00
No. 2 South, Cincinnati.....	42.90—44.90
Northern foundry, No. 2 Cleveland.....	50.30—52.30

### SCRAP-IRON AND STEEL.

Heavy melting steel.....	\$42.00—\$45.00
Steel car axles.....	55.00—60.00
Iron car axles.....	54.00—56.00
Low phosphorus.....	55.00—57.00
No. 1 cast scrap.....	34.00—35.00
No. 1 railroad wrought.....	40.00—42.00
Cast borings.....	23.00—25.00
Machine-shop turnings.....	22.00—24.00
Railroad malleable.....	32.00—33.00

## PRODUCERS DISSATISFIED WITH GOVERNMENT METAL PRICES.

**Copper Committee and National Defense Council Disagree as to Price—Metal Markets Hold Strong.**

New York, June 18—[Special.]—The magnitude of the purchasing of metals for war purposes causes no concern to producers, but an effort is being made to secure more satisfactory prices on the tonnage which does not go directly to the United States Government. Federal authorities, or at least some of them, are evidently in favor of more remunerative prices, but some of the committees of the Council of National Defense are not willing to concede all that the producers desire.

It is stated on highest authority that the National Defense authorities are not willing to concede a higher price than 20 cents per pound for copper, whereas the copper committee, of which Mr. Barnard Baruch of this city is chairman, believes that 24 cents per pound is equitable. Price adjustments covering the Government's additional needs for spelter are also being seriously considered, and it is understood that higher prices will be allowed for the metals that go into the manufacture of ammunition. Brass manufacturers, who have been directed to secure their supply of spelter from producers, on Government orders are to be charged 16 cents per pound for "brass special," but there may be a readjustment of price later on. The original agreement between the Government and the producers of spelter called for the payment of 11.50 cents for grade A, which is synonymous with "brass special." Lead manufacturers also expect a price agreement with the Government on prospective purchases of upwards of 100,000 tons of lead and its products.

Conferences were held in New York and Washington

last week looking to the purchase by the United States Government of a large lot of copper on the probable basis of 25 cents a pound. The last lot was purchased on March 20 at 16.67 cents per pound. Formal announcement as to quantity, exact price and delivery dates will be made public in a few days. The amount of the red metal which the producers will be called upon to furnish has been estimated at between 300,000,000 and 400,000,000 pounds, or enough to supply the requirements of the army and navy for the rest of the year and part of 1918, as well as covering the needs of domestic munition manufacturers who might receive Government orders.

Domestic consumers continued to hold off with substantial orders for copper last week, awaiting an announcement along these lines, despite the fact that the copper market became stronger daily, and 1917 metal was fast disappearing. As it is, there is little copper to be obtained from the leading producers for delivery before the middle of September. The publication of the Government requirements at this time is expected to result in a scramble for all available 1917 metal, and a further advance in prices for all deliveries.

While there was but slight variation in the condition of the lead market last week, a disposition developed toward the close of the week to shade the spot and June positions. The lowest price up to Thursday was 12 cents, but on Friday this price could have been shaded by one-eighth cent. The future positions ranged between

11½ and 11¾ cents. The American Smelting & Refining Co. continue to quote 11 cents as the spot price at which settlements are made on current contracts. They still decline to offer any new lead for sale. No announcement has been made as yet concerning the Government requirements, but it is known that considerable lead has been sold for various purposes on Government account.

The market for spelter was uniformly quiet last week, but notwithstanding the lack of buying interest, it held its own. The first half of this month has seen as small a demand for prime Western spelter as any other fortnight this year, and, as so many producers have refused to sell and have been dependent upon the current spot demand, there has been some accumulation of stocks at the smelters. Still this does not change the producers' views of the future, and in no direction is there found any pressure to sell for extended deliveries.

After showing a disposition to fluctuate, tin adopted a firmer tendency at the close of the week. Not a little interest was manifested in the trade in a proposed new allotment of tin among American consumers, to be fixed by a committee under authority and direction of Government officials. A committee is in process of organization which will determine the proportions to be allowed the various concerns, the object being to prevent undue storing of the metal against future necessities, and to provide for an equitable distribution according to current requirements.

#### THE WEEK'S PRICES.

	Copper.		Lead.		Spelter.	Tin.
	Lake.	Electrolytic.	A. S. & R. C.	Independent.		
Monday, June 11.....	31.00-32.00	32.50-32.75	11.00	12.00-12.25	9.55 -9.67½	60.75
Tuesday, June 12.....	31.00-32.00	32.50-32.75	11.00	12.00-12.25	9.55 -9.67½	60.75
Wednesday, June 13.....	31.00-32.00	32.00-33.00	11.00	12.00-12.25	9.55 -9.67½	60.62½
Thursday, June 14.....	31.00-32.00	32.50-32.75	11.00	12.00-12.25	9.42½-9.55	61.25
Friday, June 15.....	31.00-32.00	32.50-32.75	11.00	12.00-12.25	9.42½-9.55	62.00

### Birmingham Pig \$41, With Few Sales Recorded.

Birmingham, Ala., June 18.—[Special.]—With but few sales recorded, pig-iron in the Southern territory went to \$41 per ton No. 2 foundry during the past week, delivery during the first half of the coming year, and from that price up to \$42.50 is being asked on what little iron is to be offered for delivery during the balance of this year. The scarcity of iron for delivery during this year is more pronounced. Inquiries being received indicate there is need for a large quantity of iron yet. Sales have been made in this district, though not in quantity as yet, for delivery during the last half of the coming year, but concessions are not very liberal, it is understood. Manufacturers of pig-iron in this district are confident that the iron market is going to be strong through the entire year of 1918, and while there has been a large tonnage disposed of for the first half of the coming year there is no doubt that the demand will require the probable make of the last half also.

Special brand and special analysis iron sold during the past week at \$42 per ton, delivery during the last half of the year and even into the first half of the coming year.

Delivery of iron is being pushed as rapidly as the car service will stand for. Home consumption shows some improvement, made possible because much of the delivery is on rails of the furnace companies. One of the prominent brokers of the Birmingham district points out that while a large tonnage of iron is being moved out of the Southern territory, a considerable proportion of it is the iron that was sold under \$20. Earnings of the manufacturing companies in this district are showing steady increases, but later on, if expenditures are not greater than figured on, better results can be looked for.

Charcoal iron is quoted at \$50 per ton. Cast-iron pipe prices range between \$53 and \$56 per ton. Several specifications are being bid on, and probabilities are strong that a number of pipe contracts are to be booked during the next week or two. Melt at the cast-iron pipe plants in the Birmingham district is very healthy.

Iron make in the Birmingham district for June promises to exceed that of May. The second Shelby Iron Co.'s furnace will hardly be ready for the torch for a fortnight as yet, though there is no lagging in the preparations. This furnace will be put on coke iron, the sister furnace producing charcoal iron. There is a satisfactory result noted at the furnace recently put into blast by the Alabama Company. Progress is being

made in the rebuilding of the Little Belle furnace of the Tennessee Coal, Iron & Railroad Co. at Bessemer.

The Birmingham Trussville Iron Co. expects to get the furnace at Trussville, a few miles north of Birmingham, ready for operation during the latter part of next month.

Announcement is made that additional capital has been added to the operations of the Matthews Iron & Mining Co. at Rome, Ga., the name of the company being changed to the Matthews Iron & Steel Co. Harry S. Matthews is president. Already important contracts have been booked.

Announcement is made that the Talladega furnace is being put in shape and before the end of the year will be making iron.

Report of the earnings of the Gulf States Steel Co. for the month of May makes the best showing ever. The operations of the by-product coke plant figure in this showing.

Coke is in strong demand, and quotations are high.

Quotations in the South for pig-iron and old material are as follows:

#### PIG-IRON.

No. 1 foundry and soft.....	\$41.00 to \$42.00
No. 2 foundry and soft.....	40.00 to 41.00
No. 3 foundry.....	37.00 to 38.00
No. 4 foundry.....	35.00 to 36.00
Gray forge.....	33.00 to 34.00
Basic.....	40.00 to 41.00
Charcoal.....	48.00 to 50.00

#### OLD MATERIAL.

Old steel axles.....	\$40.00 to \$41.00
Old steel rails.....	26.00 to 28.00
No. 1 wrought.....	31.00 to 32.00
Heavy melting steel.....	23.00 to 25.00
No. 1 machinery.....	27.50 to 28.50
Car wheels.....	25.00 to 26.00
Tram-car wheels.....	24.00 to 26.00
Stove plate.....	15.50 to 16.50
Shop turnings.....	10.00 to 11.00

### Hosiery Mill With \$200,000 Capital.

Details have been determined for the establishment of a large hosiery knitting mill at Columbus, Ga., the Mitchell Hosiery Co. having been organized for this purpose. This company wires the MANUFACTURERS RECORD that the plant will begin with 200-needle women's hose, the authorized capital being \$200,000 and the daily capacity to be 500 dozen pairs of hose. John A. Mitchell is president, and A. H. Mitchell is secretary-treasurer.

A \$25,000 company has been organized by the Chamber of Commerce and Agriculture to establish a hosiery knitting mill.

## RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

### A STRONG APPEAL FOR THE RAILROADS.

#### S. Davies Warfield and Others Presented Potent Arguments in Behalf of the Lines.

As a result of the organization in Baltimore of the National Association of Owners of Railroad Securities a hearing was granted recently by the Interstate Commerce Commission to representatives of the association, who presented arguments relative to the appeal of the railroads for advanced freight rates, and reports of all the proceedings are presented in three pamphlets just issued by the new organization, of which S. Davies Warfield of Baltimore is president.

At the hearing on June 8 Mr. Warfield told the commission that approximately \$3,000,000,000 of railroad securities were represented at the meeting in Baltimore when the association was organized, there being 500 owners or representatives of owners present. He also said that the stabilizing of railroad securities was essential for the future financing of the railroads.

Darwin P. Kingsley, president of the New York Life Insurance Co., also addressed the commission, describing the relation between American life insurance and the railroads. The life companies of the United States, he said, have outstanding a total of promises to pay amounting to \$25,000,000,000, about one-eighth of the present estimated wealth of the country. Their investments in railroad securities are so large that their problems can be complicated and their efficiency powerfully influenced by the future prosperity or otherwise of the lines. He also remarked that the greater part of their investments in railroad securities were made before the commission exercised its present powers, and therefore it was its duty to preserve their integrity. If the denial of the appeal of the railroads would make their relation to life insurance doubtful it was bound to grant the request.

Henry A. Schenck of New York, president of the Bowery Savings Bank and also of the Savings Bank Association of the State of New York, addressed the commission as to their investments in railroad bonds.

Robert F. Maddox of Atlanta described the relationship existing between banks and trust companies and the railroads and their dependence upon the stability of their securities, and John E. Oldham of Boston described the relation between the individual investor and the railroads.

Several days later, on June 11, President Warfield appeared before the commission, in the absence of counsel for the association, and presented the closing argument. Among other things, he said:

"The credit of the carriers of the country, representing the greatest total aggregation of capital of any enterprise in the world, once shaken at a period of unrest like this time of war, when all the foreign governments have found it necessary to stabilize credit—the British Government going to the extent of actually guaranteeing the earnings of its railroads to be equal to those of the year just prior to the war—must necessarily seriously threaten the credit structure of the entire country."

He described the request of the railroads as reasonable, and said that their woeful lack of facilities and equipment and the effect of these conditions on business were well-known facts. Continuing, he said:

"Business is affected adversely in proportion as the carriers of the country are prevented from effectively conducting their operations. Agricultural development and the development and opening up of our millions of acres of unused lands, particularly in our great Southern country, so necessary to feed our allies and ourselves, cannot be advanced when the growth of the carriers is prohibited."

### Suggestions Concerning the Railroad Problem.

The establishment of a better understanding and a spirit of helpful co-operation among all the interests involved is a long step toward the solution of the railroad problem is the belief of the Guaranty Trust Co.



of New York, which has just issued a booklet, "The Railroad Situation," which presents the facts and states with clearness the difficulties which confront the railroads, and suggests how they may be solved.

Nearly everything except railroad transportation has doubled in price. The railroad is still carrying freight and passengers at the old rates, but it is paying twice as much for everything it buys.

Despite the most exacting and embarrassing conditions, the railroads of this country have accomplished surprising results. American railroad freight charges are the lowest in the world; the wages paid are the highest, and the operating efficiency is the greatest.

Constructive suggestions in this booklet are: "Increased rates; the Federal regulation of rates and security issues; a larger Interstate Commerce Commission, with regional and functional divisions; co-operation on the part of legislative, regulating and shipping interests to protect railroad credit and to further railroad expansion; the co-operation of investors to protect and maintain railroad credit; the recognition of our national unity of interest."

"The keynote of the hour is national unity," says the concluding paragraph of this booklet. "In unity of interest and spirit the railroad situation must be approached by representatives of all classes and sections in order that this fundamental economic problem, in which the prosperity of all is involved, may be solved along right lines, in fairness to all, for the common good."

### Disposition of Tennessee Central Railroad.

It would not be unexpected, according to a report from Nashville, Tenn., if the Illinois Central Railroad Co. acquired or took part in acquiring the Tennessee Central Railroad, which is to be offered for sale by the receivers on July 2 for the fifth time. It is further stated that President C. H. Markham of the Illinois Central, who has just made an inspection trip over the Tennessee Central property, in which his company holds one-third of the prior lien 4 per cent. 30-year bonds, amounting to \$4,014,000, and the Southern Railway the other two-thirds, admitted to the board of transportation trustees for the city of Nashville that to protect its interest in these securities it might be obliged to take the action intimated.

Mr. Markham also, it is said, would encourage the board of trustees to endeavor to secure the construction of a railroad from Nashville to Corinth, Miss., to provide a direct route from Nashville to New Orleans.

### Increased Shipments of Coal.

A statement issued by the United States Geological Survey, prepared by C. E. Leshner, shows that during May, 1917, the shipments of bituminous coal out of the central Pennsylvania, the Maryland, the New River and the Pocahontas fields in West Virginia and Virginia (11 railroads) amounted to 186,249 carloads, as compared with 170,560 carloads in April, 1917, and 173,190 carloads in May of last year. The shipments from the Eastern Kentucky and the West Virginia fields (excepting New River and Pocahontas fields), also 11 roads, amounted to 173,101 carloads in May, 1917, and 153,406 carloads in April, 1917, as compared with 173,258 carloads in May of last year. The total shipments of the entire country amounted to 739,674 carloads in May and 657,809 carloads in April, 1917, as compared with 597,517 carloads in May, 1916.

### Railroad Notes.

The Southern Railway has issued a most attractive folder concerning the beauties of Lake Junaluska, in the mountains of North Carolina, 2700 feet above sea level and on the line of this company. Its summer playground and recreation features are fully described.

### Narrow Gauge, Light Railroad for Sale.

The Snowbird Valley Railroad, a narrow-gauge line something more than 20 miles long, which connects with the Southern Railway at Andrews, N. C., is to be sold to the highest bidder, according to a formal announce-

ment in another column, saying that the owner, S. F. Chapman, will receive bids for the property until 11 A. M. July 1 at this office, No. 3 Technical Building, Asheville, N. C., when they will be opened. Besides the road itself, the sale includes two Climax geared locomotives, one of 35 tons and other of 28 tons weight; 30 logging cars, shop tools, scrap iron, etc. The line was built in 1905 with new 30-pound steel rails. Mr. Chapman is also asking for bids to tear up the track and deliver the rails on cars at Andrews.

### Railway Service for Confederate Reunion.

During the annual reunion of the United Confederate Veterans at Washington, D. C., the Southern Railway handled from the morning of June 2 to noon of June 8 a total of 26,490 passengers for this event alone. To accommodate them 43 special trains were run, besides 512 special cars on regular trains. The Confederate Veterans adopted resolutions appreciative of the action of the railroads, which gave them careful and safe handling of all their passengers on this occasion as well as of the reduced fares granted to all who attended the reunion.

### New Equipment.

Illinois Central Railroad will build in its own shops 250 box cars, 250 stock cars and 75 cabooses. They will be of wood construction.

Wichita Falls Traction Co., Wichita Falls, Tex., has received 2 all-steel pay-as-you-enter one-man-operated street cars from the builders. There are 3 more yet to come.

Virginian Railway, according to a report from Roanoke, Va., has received the first of four specimen 120-ton capacity all-steel gondola cars which are being built by as many builders. This particular car was constructed by the Cambria Steel Co., Johnstown, Pa. It has two six-wheeled trucks.

### Plans for Two Extensions.

W. S. Wilson of Malone, Fla., has purchased a railroad running from Cowarts, Ala., to Cottonwood, Ala., and he is now building a line 9½ miles long to connect it with the Alabama, Florida & Southern Railroad, of which he is president and to which he intends to sell the new line when completed. This extension, which traverses level country, is being laid with 60-pound rails. When this work is done he proposes to build a line from Malone to Greenwood, Fla., six miles. All of the work is to be finished by the middle of autumn.

### To Fully Employ Railroad Equipment.

C. A. Wickersham, president and general manager of the Atlanta & West Point Railroad and the Western Railway of Alabama, has issued a circular-letter addressed to patrons and employees stating the problems confronting the railroads with respect to securing the fullest use of their equipment and other facilities and asking for co-operation and suggestions as to accomplishing the results desired in the present emergency. Accompanying the letter is a copy of the appeal issued by the Special Committee on National Defense, Washington, D. C.

### Rock Island Receivership Will End Soon.

The United States Court at Chicago announces its satisfaction with the reorganization measures of the Chicago, Rock Island & Pacific Railway, and further states that it will discharge the receiver, J. M. Dickinson. The company will again take charge of the property about July 1. The reorganization has been accomplished without a sale of the property, and the court said the road would pay its debts and that it had plenty of money for the purpose. Nathan L. Amster of Boston is chairman of the executive committee.

### Automobiles Supplant Street Cars.

A report from Tyler, Tex., says that the Tyler Investment Co. has sold the track and equipment of the Tyler

Street Railway to a junk company at Shreveport, La., and the track is being removed from the streets. The increased use of automobiles is said to have brought about this change.

### Many Locomotives to Be Built at Richmond.

According to a report from Richmond, the American Locomotive Co. will build there more than half of the 400 narrow-gauge locomotives ordered by the Russian Government. Work upon this contract will begin in July.

### Will Do Railroad Work in Russia.

S. T. Cantrell, superintendent of the Baltimore & Ohio Railroad at Philadelphia, Pa., has secured a leave of absence in order to tender his services to the Federal Government for railroad work in Russia.

### As Viewed by a Subscriber in Far-Away Africa.

S. HORTON JONES, Bathurst, Gambia.

Enclosed you will find British postal orders to the value of 28s., which I shall thank you to accept as my subscription to the MANUFACTURERS RECORD for the year 1917.

At this moment of writing America has joined the Allies in their fight against wrong and injustice as personified by Germany.

I must also point out to you that your paper has made me feel that in America it is not everyone who worships at the shrine of the almighty dollar. No, while you have been fighting for justice and freedom you have not failed to allow your readers to conclude that after all, money, as money, is not everything, and that there are other things for which a man must die if needs be rather than lose. In two issues of your paper have I been struck by the quotations made from the Bible, and although I am not ignorant of the parables of Jesus Christ, yet I can assure you that I was greatly impressed by your quotation of the parable of the "Rich Fool." I had read it before, but it had never struck me in the way it did after reading it in your paper, and it made me feel that, after all, business need not be only money-making and profit-getting, but that one can exercise the highest virtues in spite of business. I am not sure that I have expressed myself clearly enough, but I expect you will understand my meaning.

Your articles on land reclamation and drainage have also interested me to a very great extent, and have opened my eyes to the possibilities lying in the soil.

My opinion of your paper is that it is an acquisition to any community to have a paper of its kind which speaks the truth in no uncertain-voice and always stands up for justice.

### Textile Notes.

T. C. Russell, Alexander City, Ala., will build a cotton mill, and has ordered the equipment of machinery.

The Houston (Tex.) Waste and Fiber Mill has been incorporated with \$30,000 capital by Mike H. Thomas, C. H. Thomas and F. D. Thomas.

The Enterprise Manufacturing Co., Coleridge, N. C., will build an addition to its cotton mill and install machinery for weaving cotton cloth.

Thomas Parker, cashier of the Bank of Rocky Ford, Rocky Ford, Ga., and associates plan the organization of a company to establish a knitting mill.

John H. Strigner of Newark, N. J., lately reported as to establish an underwear knitting mill at Gaffney, S. C., is not ready to state details of his plant.

E. A. Smith of Hickory, N. C.; T. C. Guthrie and C. W. Tillet of Charlotte, N. C., have incorporated the Phenix Mills Co. of East Kings Mountain, N. C., with \$200,000 capital.

The Jewel Knitting Mill of Statesville, N. C., has been organized with a capitalization of \$100,000 and officers as follows: F. B. Bunch, president and treasurer; E. B. Watts, vice-president; J. L. Sherrill, secretary. It will erect a mill to be equipped with machinery, for which contract has been awarded, for manufacturing knit goods.

## Good Roads and Streets

### SOUTHERN HIGHWAY ACTIVITIES.

Details in regard to road and street undertakings and bond issues, briefly mentioned below, are given under the proper headings in our "Construction Department" and "New Securities," published elsewhere in this issue.

#### Bonds Voted.

Alma., Ga.—Bacon county voted \$50,000 bonds for road improvements.

Clarendon, Ark.—Monroe county will issue \$250,000 bonds for road construction.

Dade City, Fla.—Pasco county voted \$10,000 bonds to complete National Highway.

Tunica, Miss.—Tunica county will issue \$226,000 bonds for road construction.

#### Bonds to Be Voted.

Ada., Okla.—Pontotoc county votes July 14 on \$650,000 bonds to construct 300 miles of sand-clay roads, etc.

Miami, Okla.—Ottawa county votes July 12 on \$400,000 bonds to construct rock and concrete roads.

Tulsa, Okla.—City votes June 28 on \$1,042,500 bonds for road construction, etc.

#### Contracts Awarded.

Caruthersville, Mo.—City awarded \$69,662.83 paving contract.

Chase City, Va.—City awarded contract to construct concrete gutters; cost \$17,500.

Covington, Va.—City awarded \$140,000 contract for sheet asphalt, asphaltic concrete, brick paving, brick gutters, concrete curb and gutters, etc.; 50,000 yards paving.

Franklin, Va.—City awarded contract for sheet asphalt and drainage and concrete gutters; cost \$12,000.

Johnson City, Tenn.—City awarded contract for 25,000 square yards paving, curb, gutter, etc.

Richmond, Va.—City awarded contract for 10,500 square yards paving; \$30,000 available.

#### Contracts to Be Awarded.

Brookhaven, Miss.—Lincoln county opens bids July 5 for improvements to 20 miles of roads.

Hamilton, Tex.—City will improve 3 miles of streets.

Knoxville, Tenn.—City asks bids until June 26 for resurfacing 35,000 square yards old brick pavement with sheet asphalt.

Lafayette, La.—Lafayette parish will construct gravel roads and concrete bridges; \$300,000 available.

Little Rock, Ark.—State will construct 130 miles of road; completed plans for 15 miles to cost \$100,000.

Meridian, Miss.—Lauderdale county invites bids until July 3 for 88,000 square yards of road improvements.

Starkville, Miss.—Oktibbeha county will construct roads; \$100,000 available.

Tarboro, N. C.—City asks bids until June 26 to construct 21,000 square yards sheet asphalt on concrete foundation with curbing, gutters, etc.

Winfield, W. Va.—Putnam county receives bids until July 9 to construct 6 miles of road.

Yazoo City, Miss.—Yazoo county asks bids until July 3 on road improvements, including 30 miles clearing and grubbing, 30 miles subgrade, 300,000 cubic yards grading, etc.

### Hawkins County, Tennessee, Building Modern Highway Across Clinch Mountain.

Rogersville, Tenn., June 15—[Special.]—Hawkins county is rapidly taking its place among other counties in Tennessee in the way of building modern highways. About 100 miles of highways have been graded since last July, when the contract was awarded to the Newell Contracting Co. of Birmingham, Ala. A \$475,000 bond issue was voted nearly 18 months ago, and only about half of this amount has been spent. It is now the intention of the Highway Commission to apply the remainder of this bond issue to macadamizing the roads already graded, and to the improvement of the cross-roads in the rural districts.

Part of the work, and especially that of crossing

Clinch Mountain, has been heavy and difficult, and has required skill as well as hustling to complete this work in less than nine months, as has been done by the forces of the Newell Contracting Co. They have spared no expense in keeping the necessary forces as well as the latest and most up-to-date machinery on this work which would hasten its early completion.

The accompanying photographs will illustrate to the



18-FOOT ROADBED CARVED FROM SOLID ROCK ON SIDE OF CLINCH MOUNTAIN.

readers of the MANUFACTURERS RECORD the difficult work encountered in crossing Clinch Mountain, several miles of which will run approximately 40,000 cubic yards per mile. The roadbed is 18 feet in width, and is benched out of solid sandstone. This was necessary because there was no way to use any of the material for fills, as the side of the mountain was so perpen-



ANOTHER VIEW OF CLINCH MOUNTAIN ROAD CUT OUT OF SOLID ROCK.

dicular it would slide off over the slick sandstone to the gorges below. The opening of this road across Clinch Mountain to the Hancock county line gives the people of Clinch Valley and of Hancock county an outlet to market their produce. As there is no railroad in Hancock, the people of that county have to haul their produce to Rogersville, the county-seat of Hawkins



SECTION OF LOOP DEVELOPMENT DESCENDING CLINCH MOUNTAIN.

county, and the only railroad point to which they have had access.

Clinch Valley is a rich and prosperous country, where are raised thousands of bushels of corn, wheat, oats, potatoes and thousands of head of beef cattle, fine horses, mules, etc., and until the opening of the Clinch Mountain route by this up-to-date highway, the people of this valley have had a bad way of marketing products of any class.

The Newell Contracting Co. has been complimented upon the able manner in which it has handled its work in this county. The company's business has been entirely in the hands of S. S. Newell as general manager, assisted by P. S. Milner as chief engineer and L. P. Mason as superintendent of construction.

### Flood-Damaged Highways of North Carolina Being Restored.

Raleigh, N. C., June 16—[Special.]—A force of State convicts is restoring the heaviest section of the Central Highway between Old Fort and the crest of the Blue Ridge, at Swannanoa Gap, about 18 miles east of Asheville. This particular part of this, the most important highway in the State, was in a great degree destroyed by the notable flood of July 16 last. Thirty convicts who have a model camp not far from the top of the mountain, are doing the work admirably well and so rapid and effective is it that automobiles are now using the road. The Central Highway is about 500 miles long, and extends from Morehead City, directly on the coast at Beaufort harbor, westward by way of Newbern, Goldsboro, Raleigh, Durham, Greensboro, Salisbury, Asheville and Waynesville to the Tennessee line.

Convicts are also restoring another mountain highway, which lies along the Rocky Broad River, in the Grand Canyon known as the Hickorynut Gap, in Henderson and Rutherford counties. This highway was in great stretches literally obliterated by the same flood. So well have the convicts pushed the work, free labor having been employed earlier, that automobiles are passing over this highway between Asheville and Rutherfordton via Hendersonville and Bat Cave. The United States and the State have aided in the work of restoration, which began quite soon after the flood damage. On the 4th of last July 12 days before this memorable flood, there was a great celebration in Hickorynut Gap at Chimney Rock, and over 800 automobiles were ranged along the road. Twelve days later only a bird could have made the trip.

The county of Ashe went against bonds for good roads by a small majority, and Caldwell lost out in the same way, but various other mountain counties voted for bonds for good roads by a handsome majority, and there is great activity in several of these. Wilkes is pushing the work, and there is a strong movement for the construction there of some of the eastern section of what is known as the Daniel Boone Highway, which follows that great pioneer's trail from North Carolina into Kentucky, and which begins at Winston-Salem. The highway along this trail is nearly all marked by stone and bronze monuments five miles apart, and it crosses the Blue Ridge not far from Blowing Rock at an altitude of about 4000 feet. Wilkes, which has been a roadless county, is building fine highways with money which it voted by a large majority last September.

### Contract for \$140,000 Street Paving.

The city of Covington, Va., has awarded a \$140,000 contract for the street paving for which bids were recently invited. This contract has been received by the Central Construction & Supply Co., Harrisburg, Pa., and Richmond, Va., and calls for 50,000 yards of sheet asphalt, with 28,000 feet of concrete curb and gutter.

### Addition to Bag Factory to Be Constructed.

An additional factory building of concrete construction will be erected by the Fulton Bag & Cotton Mills of Dallas, Tex. It will be a 100x50-foot five-story-and-basement structure to be equipped with machinery for increasing the company's capacity to manufacture cotton cloth and bags. The Watson Company of Dallas has received the building contract, and Lang & Wittchell of Dallas are the architects.

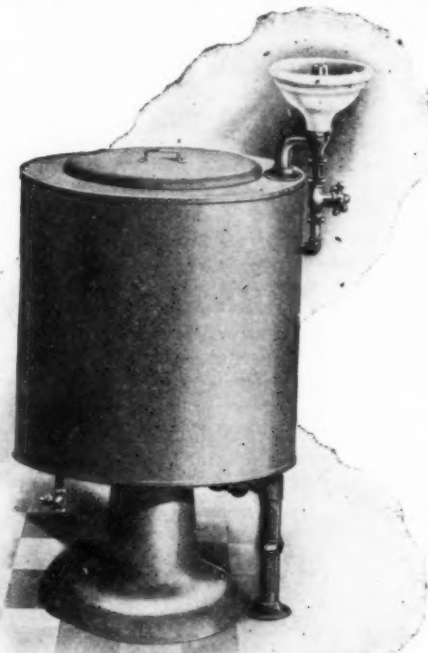


# MECHANICAL

Illustrations and descriptions having news value pertaining to developments in machinery, mechanical devices and inventions will be considered for use in this department.

## A Sanitary Cooler Fountain.

Sanitary drinking fountains that supply cool water are now considered necessary in the equipment of factories, mills, etc., for the preservation of the comfort and health of employees. Ordinarily the fountains are placed at convenient points in the buildings, to which water is piped from a central refrigerating station, which necessarily demands a considerable outlay for



"EBCO" COOLER FOUNTAIN.

pipes and other equipment. Moreover, there is a large loss of coolness through radiation.

The cooler fountain here illustrated, which is made by the D. A. Ebinger Sanitary Manufacturing Co., Columbus, O., is simple in construction and complete in itself. It is connected to the water supply system, and the drinking water passes through the cooling coil, which is immersed in ice water, and then flows up to a porcelain enameled bubbler. The fountain is controlled by a valve that closes automatically when the bubbler is not in use, and this characteristic eliminates the possibility of waste of water.

The ice chamber is insulated, and occupies the central part of the fountain. It is surrounded by the cooling coil, through which the drinking water circulates. The ice chamber holds about 100 pounds of ice, sufficient under ordinary circumstances to last two days. The waste pipe from the bubbler is concealed in the insulating chamber.

## Recovering Valuable By-Products from Tar at Barrett Plant in Birmingham.

The coal-tar distilling plant of the Barrett Company at Birmingham has been gradually developed during the past few years, and is now achieving its purpose of taking care of the annual coal-tar production of a large section of the South. The by-products plants of the steel companies in the Birmingham district furnish a considerable part of the tar and the balance comes from the various gas companies in Southern municipalities.

The crude tar arrives at the plant in tank cars, and is stored in steel tanks, which constitute the casual visitor the most striking feature of the plant. The refining process divides the crude tar into various products by boiling off, one after another, the successive volatile elements. The lighter oils serve various purposes in chemistry, ranging from beautiful colors to high explosives. The Birmingham plant confines its business primarily to the production of the heavier elements, namely, pitch and creosote oil. The former is

widely used in roofing, paving, waterproofing, electric carbons, foundry core compounds, etc.

With certain modifications, the pitch also finds a large and rapidly-growing market for road-bonding, under the name of tarvia. The inability of ordinary macadam to withstand the modern automobile has made some such bituminous binder a necessity for all heavily-traveled roads, and tarvia is becoming a primary feature of the company's line.

The creosote has many important uses for the preservation of wood against decay, and is mixed with colors for shingle stain.

During normal times considerable hard pitch is exported from the Birmingham plant to Europe to be used as a binder in the manufacture of briquet fuel from coal dust.

About 30 acres of land are occupied by the plant with its ample trackage and its warehouses for finished products made in the plant or shipped for storage from other Barrett plants to be marketed by the local selling organization.

Stanley Woodward is manager of the plant, and William G. Bickell is sales manager.

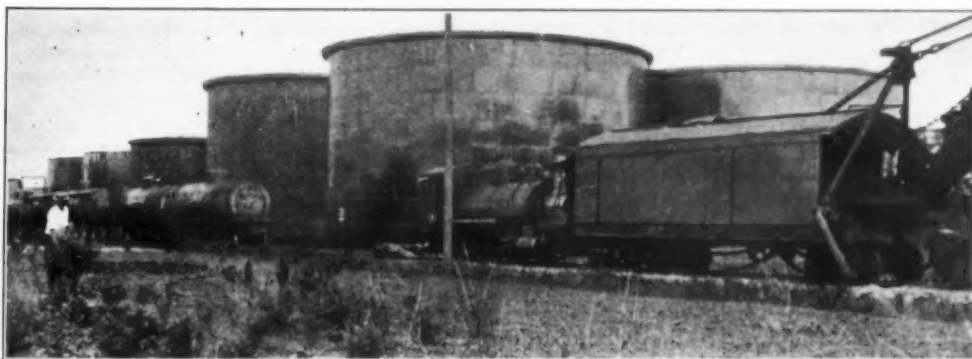
The Birmingham plant is still probably only a nucleus of greater developments to come. The Barrett Company has profited very largely in war orders, and the profits have been mainly turned back for the enlargement of the company's resources. The capital stock has been greatly increased, and there is every expectation that its business will be much expanded during the next few years.

One important factor is the increasing necessity, even here in rich, wasteful America, for conserving our natural resources and utilizing by-products which once were discarded. To burn raw coal is a serious national waste which other nations are stopping. The burning up of such valuable things as tar, gas, ammonia and creosote in coal in our reckless manner cannot go on forever, in view of the fact that the clean, bright-burning coke which remains after those products are extracted is a

better fuel than the raw coal. The passing of the old beehive coke ovens in favor of the modern ones, which conserve the profitable by-products, means an increase in the production of coal tar, for which the Barrett Company must develop profitable uses. The tar production of recent years would have become a drag on the market and would have been consumed as fuel by the producers if the Barrett Company had not developed its usefulness as a road binder and in other directions.

The flood of tar will doubtless continue to come on in ever-increasing volume. What will be done with it remains to be seen. A slight cheapening of the cost might easily set coal-tar products to invading fields now dominated by other materials. Benzol, for example, will drive a motor as well as gasoline. Tarvia is used on probably only 5 per cent. of the highways where it would pay its own way in lowered maintenance costs. The roofing field holds wide possibilities, for while Barrett specification roofs are used extensively on big flat roofs, the miscellaneous small roofs and steep roofs are not by any means as largely made of tar as they might be.

Underground waterproofing is now confined to large buildings, but its use can be spread to dwellings and miscellaneous edifices and made more universal by a better public appreciation of how damp cellars steal heat and health. Wonderful paints, particularly black paints for hard weather and water exposure, are made from tar. Creosote is still in its infancy. We have allowed wood to rot in the past because wood was cheap and abundant, but the time is fast coming when all wood that is exposed to dampness, such as fenceposts, telegraph poles, railroad ties, dock timbers, stable floors, mine timbers, paving blocks, etc., will be creosoted as a matter of necessary economy. The Barrett Company's work in enlarging fields of consumption by intelligent effort is here exemplified in Carbosota, a refinement of creosote, which makes it effective when applied without pressure, as by dipping in a hot tank or by application with a brush. The refinement and standardization of this product under a trade-mark name opens a field of



TANKS FOR STORAGE OF CRUDE TAR AND CREOSOTE OILS. CAPACITY OF LARGE TANKS IN FOREGROUND 1,000,000 GALLONS.



BIRD'S-EYE VIEW OF SECTION OF BARRETT PLANT AT BIRMINGHAM. LABORATORY ON RIGHT OF ELEVATED WATER TANK.

usefulness where creosote had previously made only limited headway by reason of certain minor practical difficulties.

Some day stock farms will be as intolerant of flies as hospitals are, for flies worry the stock and reduce flesh and milk. Coal tar provides, in a product which the Barrett Company calls "Creonoid," a cheap cow spray that banishes the pests.

Finally, in sulphate of ammonia, the Barrett Company has a powerful nitrogenous fertilizer which makes many blades of grass and other things grow where one grew before. As our virgin lands become exhausted of their natural productiveness we shall use sulphate of ammonia in vastly-increased quantities.

## LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

### Is There a Conspiracy for Restraint of Lumber Trade?

Gum Lumber Manufacturers' Association,  
Memphis, Tenn., June 11.

Editor *Manufacturers Record*:

We are enclosing herewith copy of an anonymous letter which has fallen into our hands. As a rule, no attention should be paid to anonymous letters, but this letter contains such interesting reading matter for all lumbermen that we think it proper that it be published. It is, as you will see, a bold attempt on the part of someone to create a false condition in the lumber market and to take advantage of the lumbermen, who are described as the "weakest sisters" in the country.

We will be glad to have you publish this letter, with such comment as you may think proper.

GUM LUMBER MANUFACTURERS' ASSOCIATION,  
J. M. PRITCHARD, Secretary.

Mr. Lumberman:

#### THIS IS IMPORTANT.

LUMBER IS TOO HIGH. It is the time WE CONSUMERS have SOMETHING TO SAY ABOUT IT. It will take UNITED EFFORT, but we cannot organize or we stand in jeopardy of the law. Dry stock happens to be scarce, but the mills are sawing more than will be needed for the next two years.

Just try this and see how it works towards bringing prices to where they belong. Beginning June 15, for 30 days, don't buy a foot of lumber unless ABSOLUTELY NECESSARY, no matter what price they make. Tell all lumbermen salesmen you have enough stock to last you a LONG TIME and that all indications are downward. Enlarge upon this all you wish. Tell them business is poor and going to pot. It can't go any higher in price; the chances are all in our favor.

If 60 per cent. of the buying trade sit tight and don't talk to people of this effort to reduce price, you'll see prices tumble fast. The lumbermen are the weakest sisters in the country, and get scared easily. They haven't the nerve to stick. Just see if these predictions don't come true.

We are spending our money and time in getting out 20,000 of these letters to trade with NO JOBBING OR MILL CONNECTIONS. You can do the same by writing a few of your friends to hold the fort. Relief is coming, and A DOLLAR SAVED IS ONE EARNED. Your pocket-book is at stake. Watch it carefully now. Be careful not to let mill people know of this effort. Don't even inquire for stock for 30 days; the mills will need money so badly in 30 days they will come to us. E Pluribus Unum.

### Laboratory Experiments with Southern Lumber.

Madison, Wis., June 16—[Special.]—The Forest Products Laboratory has undertaken a new work of particular value to the lumber industry in the South.

J. E. Imrie of the timber physics department of the United States Forest Products Laboratory here, has left for Louisiana, where he is co-operating with the owners of a large mill in an effort to speed up the drying of Southern pine lumber. While in the South on a previous trip, Mr. Imrie devoted his attention to rapid drying of one-inch stuff. At present he is completing work begun on his former trip and also starting experiments on the rapid drying of six to eight-inch thick Southern pine.

The laboratory is expecting a shipment of white ash, both delta grown and upland, for drying experiments.

The work will be undertaken largely to find out if there is any difference in the rapidity with which the lowland stuff will dry compared with the upland. This work is similar to the experiments with other woods with the object of determining the effect of location on the properties of the timber.

To gather data which will help explain the phenomenon of resin formation and thus aid in intensive chipping work is the object of microscopic work now being carried on in Florida by Miss Elois Gerry, a microscopist at the United States Forest Products Laboratory here and in charge of the study of the minute structure of wood. Miss Gerry is examining the chips from resin-producing trees as a means of gaining information about resin-producing cells. She has found that after the wound in the tree is made there is a tendency for the tree to close over the incision and develop more resin-producing cells.

After completing her work at the national forest in Florida Miss Gerry will go to Louisiana and continue her investigations in that State.

Miss Gerry, who is well known in scientific circles as a microscopist of great ability, has been with the Forest Service for six years. She is now doing research work in the University of Wisconsin. During the course of her microscopic work last year it occurred to Miss Gerry that her methods could find application in the problem of resin formation. She began investigations immediately, and her work in the South at present is in continuation of the experiments begun at the laboratory here.

The work of Miss Gerry in making microscopic studies of wood has made it possible for the laboratory to obtain the largest collection of photographs in the country showing the structure of American woods. These photographs are of immediate help to anyone studying wood structure, for they make it unnecessary to resort to the microscope since they furnish a permanent record of the magnified structure. In preparing these photographs Miss Gerry is assisted by Dr. M. E. Diemer, the laboratory photographer.

One of the most useful applications of these photographs of wood structure is being made in connection with wood preservation. By means of the photographs it is possible to determine just how the various structural elements impede or assist the penetration of the preservative. The present work along this line is concentrated on a study of the bordered pits which are minute valve-like structures occurring on the sides of wood cells.

## FOREIGN NEEDS

Machinery and equipment wanted abroad are mentioned in many letters received by the MANUFACTURERS RECORD, which is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. For the benefit of our subscribers seeking foreign trade we publish the following extracts from recent letters:

### Wanted for Dutch East Indies.

F. HEYNERT, Hotel McAlpin, New York, of C. Strauss-Evans, Amsterdam and Manchester, representing G. Hoppenstedt of Dutch East Indies.

I am in the United States trying to get reliable connections with manufacturers and shippers of: Cotton piece goods; lawnprints; dyed lawns; checks; stripes; fancy lawns; pongees, printed as well as dyed; dyed and printed brocades; dyed and printed crepes; serges; white shirtings; white lawns; Persian lawns; striped woven drills; striped shirtings; shirting prints; dyed and printed voiles; white and printed handkerchiefs; tussors; batiste prints; zephyrs; oxfords; black and cold velvets and pluche; mohairs; cotton and half-cotton canvas; bicycles; automobile tires; socks; stockings; garters; small iron and copper shoenails; shoes; shoebuckles; shoelaces; shoeheels of wood; buttons; shoerings and knobs; cheap watches; brushes (ripolin included); waterproof raincoats and raincapas; ball thread; thread on reels; mercerized yarn; pins; safety-pins; needles; small ironware (locks, bolts, wire nails, etc.); mirrors; press buttons; straw and felt hats; razors; zephyrwool; shot; cement; Auerbach candies; tinned salmon in flat tins; biscuits; sugar plums; unused old newspapers; galvanized corrugated iron sheets; nickel in small blocks; all kinds of haircombs; umbrellas;

parasols; towels; toys; singlets; double articles; leather goods (belts, pouches, etc.); firestones; inks; writing paper in fancy boxes with envelopes; school writing books; packing paper; beer in bottles; chemicals; cotton and linen laces; Victor shears; slate pencils; glass beads; celluloid beads; files; screws; Belgian iron in bars; tacks; slippers.

### Chemicals Wanted in France.

J. BARRIOS Y CABELERO, Druggists, Girardot, France.

Please favor us with prices on following every month: Permanganate of potash, crystals; oxide zinc, red sea, French; spirits turpentine, in gallon tins; boiled linseed oil, in gallon tins; white codliver oil, in gallon tins; commercial almond oil, in gallon tins; castor oil, in gallon tins; powdered nitrate; powdered chlorate of potash; powdered antimony; powdered chlorate of barytu (chloride); alum (lump); flomeda of sulphur, lump sulphur; powdered cream of tartar; bicarb. soda, prices by ton; glauher salt (small crystal), prices by ton; proto-oxalate of iron in powder; ammonio-citrate of iron (scales); fish glue (sheet); yellow gum-lac (scales); gum arabic (as it runs); mottled "Alicante" soap (Castile); sublimed calomel; red oxide of mercury; nitrate of silver, crystals and fused 50 per cent.; powdered American vermilion; salol; benzoate of soda; benzonaphthol; valeria; guayacol; metallic iodine; iodoform in powder; iodide of potash; thymol; sulphate of quinine; bromide of quinine; chloride of quinine; valerianate of quinine; glycerophosphate of soda in powder; glycerophosphate of lime in powder; redistilled glycerine, white and very pure, in tins of 20 pounds.

### Africa Wants American Products.

LOUIS BOUTBOUL & Co., 8 Rue de la Commission, Tunis, Africa.

We are interested in American leather for shoes, hides, box calf, kid in black and colors, furniture for dwellings, polished Texas rice, etc. We would be pleased to act at Tunis as agents for important houses. We have a special department exporting products of our country, and we desire to be represented in America by an agent for our olive oils, soaps, dates, etc. We offer some virgin olive oils extra pure guaranteed. Can be exported in five-pound lots.

### Oil Engines Wanted for Europe.

LANCASHIRE DYNAMO & MOTOR CO., LTD., 107 Duke Street, Toronto, Canada.

We want (for shipment to Europe) stationary oil engines for driving small generators, preferably two-cycle, for operation with low-grade oils. Prices desired f. o. b. packed for shipment, on standard engines from 5 to 50 horse-power, with illustrations and specifications. Manufacturers should also state discount allowed on an order of 12 engines of any size.

### Soap Wanted in Trinidad.

W. D. LEWSEY & Co., Cleaning Establishment, 70 Frederick Street, Port of Spain, Trinidad.

Our agency department is on the market for soap manufactures, as we intend opening an extensive agency business in blue and other soaps for domestic purposes.

### Wants Shoes for France.

MADAM SABROU, No. 3 Place Deepres, at Perpignan, France.

I want illustrated catalogues of footwear for gentlemen, ladies and children.

The Tucker Mills, Baltimore, have leased property which the owner will remodel for the company. Upon completion of the improvements an equipment of machinery will be installed for the manufacture of automobile tire products. Lately the company was mentioned as to build an addition for these products.



# Construction Department

## IN ORDER TO FOLLOW UP

Properly the Construction Department items, please bear in mind the following statements:

### EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

### HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be written on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the post-office will generally be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur, as our reports are often published before new companies are known and before they have any established office for the receipt of mail.

### WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

### DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year.

All advertising contracts in the Manufacturers Record for three months or longer include a subscription to the Daily Bulletin for the contract period, as well as a subscription to the Manufacturers Record.

### BRIDGES, CULVERTS, VIADUCTS

Ga., Newton.—Baker County Comms. contemplate construction of bridge across Flint River; O. O. Worley, Clerk Mitchell County Comms., Camilla, Ga., authorized to obtain estimates of cost. (See Machinery Wanted—Bridge.)

Ga., Montezuma.—Macon County Comms., A. H. Perry, Clerk, Oglethorpe, Ga., asks bids until July 10 to construct 18x24-ft. reinforced concrete bridge; grade road by county force; Arthur Pew, Engr., 500 Forsyth Theater Bldg., Atlanta, Ga., states other contracts will be let as soon as plans are prepared. This is first of series of small concrete bridges for which county was lately noted soon to ask bids; \$100,000 bonds for bridge construction were noted voted in March. (See Machinery Wanted—Bridge.)

Ga., Woodbine.—Camden County voted \$20,000 bonds to construct bridge across Satilla River at Woodbine on Dixie Highway. Address County Comms., St. Marys.

La., Lafayette.—Lafayette Parish Police Jury will construct concrete bridges in connection with gravel-road construction. (See Road and Street Work.)

Miss., Greenville.—Washington County Supvrs., E. W. Wood, Chrmn. Highway Com., ask bids for July 2 to construct steel highway bridge across Granicus Bayou; J. S. Allen, Ch. Engr. (See Machinery Wanted—Bridge Construction.)

Okl., Ada.—Pontotoc County Comms. are reported to call election to vote on \$650,000 bonds to construct bridges and roads.

Okl., Ada.—Pontotoc County Comms. ordered election for July 14 to vote on \$650,000 bonds to construct concrete culverts and bridges and 300 mi. sand-clay roads; portion of issue to be used to build bridge across South Canadian River.

Okl., Quapaw.—Miami Mineral Belt R. R. Co., W. Matthews, Ch. Engr., Box 206, will build 8 timber bridges in connection with railroad construction, for which contract has been let.

Okl., Tulsa.—City will vote on \$1,000,000 bonds, to include \$30,000 for city's share of cost of constructing subways and viaducts; John H. Simmons, Mayor.

S. C., Gaffney.—Cherokee County Comms., Gaffney and York County Comms., York-

ville, let contract Southern Bridge Co., Birmingham, at \$19,750 to construct bridge across Broad River. (Lately noted.)

Tex., Farwell.—Parmer County Comms. let contract O. C. McErath, Gilmer, Tex., at \$22,780 for earth grading and reinforced concrete bridges and culverts on 40 mi. highway.

### CANNING AND PACKING PLANTS

Fla., Fort Pierce.—Indian River Packing Co., Cocoa, Fla., will erect citrus fruit packing plant; frame; brick piers; 60x100 ft.; require 100,000 ft. lumber and 17,000 bricks; cost \$10,000; daily capacity 3 carloads canned goods.

Fla., Orlando.—Commercial Groves Co., Manatee, Fla., contemplates building plant to manufacture marmalades and other citrus-fruit by-products.

Ga., Moultrie.—Swift & Co. of Chicago purchased Moultrie Packing Co.'s meat-packing plant; reported to enlarge.

Ky., Seoville.—Bank Creek Canning Co. increased capital from \$20,000 to \$25,000.

N. C., Navassa.—Cape Fear Packing Co. (in May noted as organized with \$200,000 capital, etc.), G. Herbert Smith, Prest., 404 Southern Bldg., Wilmington, N. C., has plans and specifications for constructing and equipping meat-killing and packing plant; 180x60 ft., 4-story-and-basement, reinforced concrete and brick construction packing-house; mechanical equipment to include elevators, boilers, engine, generator and switchboard, packing-house machinery, refrigerating machinery and piping, steam fitting, etc.; bids until July 11 for construction and equipment; daily capacity 300 hogs and 10 cattle; plans, etc., at office of Cape Fear Packing Co. and of Atlanta Builders' Exchange, Atlanta, Ga.; obtainable on application to Archts., Wilson & Sompayrac, Palmetto Bldg., Columbia, S. C., and to Packers' Architectural & Engineering Co., Manhattan Bldg., Chicago. (See Machinery Wanted—Packing-house Equipment.)

S. C., Florence.—Directo-Retailer Canning & Marketing Co., capital \$5000, inceptd. by J. W. McCown, T. P. Spencer, Howard P. Cole and E. Cottingham.

Tex., Houston.—Gulf Sea Food Co., capital \$2,000, incept. by H. B. McElmurray and

M. G. Lorine of Houston and A. B. Lorine of Matagorda, Tex.

Va., Lynchburg.—Dawson Bros. Mfg. Co., L. J. Dawson, Prest.-Mgr., will install machinery to manufacture jelly, preserves, pickles and vinegar; open machinery bids July 1. Lately noted. (See Machinery Wanted—Preserving, Pickling and Vinegar Machinery.)

Va., Norfolk.—Eastern Farming & Packing Corp., capital \$15,000, chartered; Thos. E. Coulbourn, Prest.; R. J. B. Page, Secy.

### CLAYWORKING PLANTS

W. Va., Beckley.—Brick and Tile.—Raleigh Brick & Tile Co., capital \$20,000, inceptd. by B. E. Clark, C. L. Beckner, W. W. Hume and others.

### COAL MINES AND COKE OVENS

Ala., Birmingham.—West Helena Coal Co. increased capital from \$2,000 to \$30,000.

Ala., Birmingham.—Minnie Coal Co., capital \$10,000, inceptd.; W. W. Shortridge, Prest.; J. C. Simmons, V.-P.; Minnie S. Shortridge, Secy.-Treas.

Ala., Searles.—Aetna Coal Co., 222 Woodward Bldg., Birmingham, Ala., organized; J. B. Robinson, Prest. and Treas.; J. M. Smith, V.-P. and Secy.; W. P. Yeatman, Mgr.; develop 300 acres; daily capacity 400 to 500 tons; R. L. Totten, Birmingham, Constr. Engr.; install hoisting engine and boiler. (Lately noted inceptd.)

Ky., Barbourville.—Brush Creek Blue Gem Coal Co. inceptd. by J. B. Campbell, Mae Campbell and W. H. Green.

Ky., Emanuel.—Glenwood Blue Gem Coal Co. organized by H. C. Gillis, J. B. Campbell, Sue May Campbell and others.

Ky., Evarts.—Clover Gap Coal Co., capital \$50,000, inceptd. by L. A. Baming, George Whitcomb and R. E. McNew.

Ky., Harlan.—Turners Creek Coal Co. inceptd. by Virgil Eversole, G. A. Eversole, J. E. Sampson and others.

Ky., Harlan.—Shawnee Coal Co., capital \$15,000, inceptd. by G. A. Denham, C. Perkins, N. R. Denham and J. R. Sampson.

Ky., Middlesboro.—Cumberland Fuel Co. increased capital from \$200 to \$20,000.

Ky., Nolansburg.—Kellloka Coal Mining Co., capital \$15,000, inceptd. by L. K. Rice, L. H. Rice, R. B. Rice and C. N. Rice.

Ky., Paintsville.—Lick Fork Coal & Land Co., capital \$30,000, inceptd. by H. Lavers, E. J. Evans and C. T. Rule.

Ky., Pineville.—Flat Lick Coal Co., capital \$5000, inceptd. by J. G. Foley, John Grant Foley and Annie W. Foley.

Ky., Pinesville.—Flat Lick Coal Co. organized; P. A. Wood, St. Petersburg, Fla., Prest.; M. P. Miller, V.-P. and Mgr.; J. W. Taylor, Box 318, Secy.-Treas.; both of Pineville; develop 300 acres; estimated daily capacity 300 tons; install tipples 22 ft. high; approach to same from ground level 150 ft. long. In May noted inceptd., capital \$15,000. (See Machinery Wanted—Mining Equipment.)

Ky., Whitesburg.—Caudill Coal Co. organized; M. J. Moss, Prest.; E. S. Moss, V.-P.; L. W. Fields, Secy., Treas. and Mgr.; develop 425 acres; daily capacity 10 cars; cost of plant \$35,000; electric operation. Lately noted. (See Machinery Wanted—Mining Machinery.)

Ky., Whitesburg.—Elk Horn Superior Coal Co., capital \$25,000, inceptd. by A. F. Parsons, J. K. Parsons, J. W. Montgomery and others.

Ky., Yost.—Belton Coal Co., capital \$25,000, organized by H. C. Thompson, D. P. Browning and P. A. Forsythe.

Md., Eckhart.—Cumberland Big Vein Coal Co., 136 Baltimore St., Cumberland, organized; L. Lee Lichtenstein, Prest. and Mgr.; I. Blaine White, V.-P.; Edw. Ryan, Secy.; develop 100 acres; daily capacity 250 tons; A. Winfield, Constr. Engr., Cumberland. (Lately noted inceptd., capital \$25,000.)

Okl., Claremore.—O'Bannon Co., capital \$100,000, inceptd. by F. Y. O'Bannon of Claremore, R. A. O'Bannon of Sherman, Tex., and J. W. Hassell of Denison, Tex.

Okl., Hartshorne.—Hartshorne Coal & Material Co., capital \$5000, inceptd. by J. E. Laydon, J. O. Edson and W. P. Mitchell.

Okl., Hartshorne.—Hartshorne Coal Co.,

capital \$5000, inceptd. by J. E. Layden, J. O. Edson and W. R. Mitchell.

Tex., Temple.—Denison Coal Co., capital \$20,000, inceptd. by F. L. Denison, P. W. Denison and T. J. Laramey.

Va., St. Paul.—Virginia Coal Sales Co., capital \$25,000, inceptd.; W. H. Nichols, Jr., Prest.; D. E. Allen, Secy.-Treas.; both of Big Stone Gap, Va.

Va., Tazewell.—Lewis Creek Banner Coal Co., capital \$50,000, inceptd.; A. S. Higginbotham, Prest.; H. L. Spratt, Secy.

W. Va., Big Creek.—Big Creek Land Co., capital \$50,000, inceptd. by John C. Dickinson, S. L. Flournoy, N. E. Farry and others.

W. Va., Charleston.—Blue Ridge Fuel Co., capital \$500,000, inceptd. by Arthur R. Miller of Charleston, Louis H. Hamilton and Clarence M. Cooke of McKees Rocks, Pa., and others.

W. Va., Clarksburg.—Talbot Coal Co., capital \$5000, inceptd. by A. L. Talbot, O. L. McDonald, E. H. Bell and others.

W. Va., Clarksburg.—Valley Run Coal Co., capital \$5000, inceptd. by W. J. Calvert, O. C. Fisher, Chas. E. Gat and others.

W. Va., Clarksburg.—Fort Pitt Coal Co., capital \$50,000, inceptd. by John P. Keeley, Percy Byrd, Richard Scott and others.

W. Va., Cleveland.—Cleveland Sunbeam Co., capital \$200,000, inceptd. by C. W. Campbell, D. W. Brown, C. N. Davis and others.

W. Va., Coal Bloom.—Halcon Coal Co., Robson Prichard Bldg., Huntington, W. Va., organized; J. H. Murray, Prest.; C. E. Coryell, Secy.; A. J. Connelly, Treas.; each of Huntington; J. G. Biggs, V.-P., Coal Bloom; develop 500 acres; ultimate capacity 1000 tons daily. Address machinery bids to manager. (Under W. Va., Huntington, lately noted inceptd., capital \$50,000.)

W. Va., Ethel.—Cleveland Cliffs Iron Co., 1190 Rockefeller Bldg., Cleveland, Ohio, will operate mines with monthly output of 600 tons. (Under W. Va., Logan County, Walter G. Merrick of Cleveland lately noted as purchasing property of Ethel Coal Co. and to extend developments.)

W. Va., Flemington.—Mutual Coal Co., Fairmont, W. Va., organized; W. H. Conaway, Prest.; Wilber O. Nelson, V.-P.; Carroll A. Turner, Mgr.; Edgar T. Brown, Secy.-Treas. and Constr. Engr., Clarksburg, W. Va.; acreage not decided; estimated daily capacity 500 tons. Lately noted inceptd., capital \$20,000. (See Machinery Wanted—Mining Machinery.)

W. Va., Huntington.—W. E. Deegans Coal Land Co., capital \$100,000, inceptd. by W. E. Deegans, A. E. Scheuneman, W. L. Van Zandt and I. F. Vass.

W. Va., Lex.—Hanging Rock Pocahontas Coal Co., capital \$25,000, inceptd. by E. M. Evans and H. W. Evans of Lex, B. A. Decker, S. B. Payne and D. M. Easley of Bluefield, W. Va.

W. Va., Logan.—Greenmount Coal Co., capital \$20,000, inceptd. by W. B. Nisbet and R. H. Nisbet of Slagle, W. Va., and others.

W. Va., Logan.—Burneagle Coal & Coke Corp., 507 Strickland Bldg., Roanoke, Va., plans to develop 323 acres coal land in Logan and Mingo counties; contemplates installing 4 plants with annual capacity 800,000 tons coal by Jan. 1; build by-product coke ovens; install electrical mining equipment. (Lately noted, under Va., Roanoke, as chartered with \$1,000,000 capital and Jas. E. Walker, Prest.)

W. Va., Mable.—Randolph Coal Co., capital \$5000, inceptd. by E. H. Arnold, D. V. Moyle, Phil. Williams and others.

W. Va., Man.—Huff Mining Co., capital \$25,000, inceptd. by R. M. Wilson, Elmer McDonald, B. H. Oakley and others.

W. Va., Taylor County.—Comfort Coal Co., capital \$50,000, inceptd. by E. E. Duval, John W. Schott, Jr., Denton Borger and others of Pittsburgh, Pa.

W. Va., Welch.—Solvay Collieries Co., general offices, Syracuse, N. Y.; C. C. Morfit, Supt., Welch, advises Manufacturers Record: New development will be known as Exeter Colliery; main hoist shaft to have 4 hoists, 2 working from Pocahontas No. 3 seam and 2 from Pocahontas No. 4 seam; acreage available, 1700 for each seam; anticipated daily output fully developed, 4000 tons; cannot now estimate cost of machinery; start work on shafts within 30 days; probably complete with machinery installed

within 12 mos.; this operation near Harvard, Warwick and Orkney collieries, but will necessitate building mining town, including store, offices, etc. (Lately noted.)

W. Va., Wallens Creek.—Wheeler Boone Coal Co., capital \$25,000, inctpd. by C. W. Dillon of Fayetteville, Wheeler Boone, Eli J. Taylor and others of Nuttallburg, W. Va., and others.

W. Va., Weirton.—Helenic Bros., capital \$10,000, inctpd. by Andy Stallatt, John Claidas, Geo. Stamateios and others.

### COTTON COMPRESSES AND GINS

Tenn., Dyersburg.—Dyersburg Cotton Compress Co. increased capital from \$50,000 to \$75,000.

Tex., Teague.—Teague Compress Co., capital \$25,000, inctpd. by Upton Blair, Neil Kennedy, John Riley and others.

### COTTONSEED-OIL MILLS

Ark., Morrilton.—Morrilton Cotton Oil Co. increased capital from \$100,000 to \$120,000.

Ark., Piggott.—East St. Louis Cotton Oil Co., East St. Louis, Ill., let contract Huston H. McNeil of Piggott to erect cotton gin; 3 stands; 80 saws; daily capacity 30 to 35 bales; cost \$8500.

### DRAINAGE SYSTEMS

Ark., Harrisburg.—Poinsett County Drainage Dist. No. 7 issued \$1,000,000 bonds; the district comprises 146,000 acres in St. Francis basin. Address County Commrs.

Ark., Lonoke.—Comms. Bayou Meto Drainage Dist. No. 1, T. M. Fletcher, Chrmn., let contract R. H. & G. A. McWilliams, Memphis, Tenn., at \$344,000 to construct drainage system; 70 mi. canals; 60-ft. bottom to 120-ft. outlet; average width 13 ft.; 3,046,850 cu. yds. dredge ditch, 51,700 cu. yds. team ditch and 350 yds. clearing; reclaim 71,000 acres in Lonoke county; issued \$375,000 bonds; M. Y. Smith, Engr. in charge; Ford & McCrea, Consult. Engrs., Little Rock. (Lately noted inviting bids.)

Fla., Arcadia.—De Soto County Limestone Drainage Dist. will construct drainage system; 33 mi. open drainage canals, bottom widths from 3 to 12 ft.; 438,990 cu. yds. excavation; 4 reinforced concrete drops; bids until June 30; E. B. Wilcoxon, Prest. Supervisors; Cavens & Kimmel, Engrs., Arcadia. (See Machinery Wanted—Drainage System.)

Fla., Jupiter.—Jupiter Drainage Dist. organized to reclaim 140,000 acres of land; 24 mi. canals; cost \$175,000; J. M. Burguières, Chrmn. committee.

Fla., Miami.—Southern Drainage Dist. organized with J. F. Jandon, Prest. Supervisors; Geo. T. Morgan, Secy., and John W. King, Engr.; plans to reclaim 120,000 acres.

Ga., Norcross.—Sweetwater Drainage Dist., Gwinnett County, will construct 18 mi. ditches to drain 2000 acres bottom lands; asks bids. Address John R. Cain, Norcross, R. F. D. No. 1. (See Machinery Wanted—Drainage System.)

Miss., Greenville.—Black Bayou Drainage Dist. will construct 133 mi. drainage ditches; let contracts July 12; excavate 970,000 cu. yds. earth, work for 3 drag-line machines, and 3,700,000 cu. yds. earth, requiring 7 floating dipper dredges; Morgan Engineering Co., Dist. Engr., 608 Goodwyn Institute Bldg., Memphis, Tenn. (This district noted organized in September, 1916. O. C. Kulicka, Secy.; acreage 100,000; total cost of contemplated improvements, including legal, engineering and administrative expenses, estimated at \$576,000; Morgan Engineering Co. then about to commence survey.) (See Machinery Wanted—Drainage.)

### ELECTRIC PLANTS

Ala., Albany.—Alabama Power Co., Birmingham, will expend \$5000 to \$10,000 in improvements to plants and transmission systems.

Ga., Americus.—Americus Lighting Co. will issue \$250,000 bonds and \$100,000 stock for purchasing properties of Americus Public Service Corp. and to make additions, extensions and improvements.

Ky., Hardinsburg.—Hardinsburg Electric Light Co. (Alfred Taylor, interested), is reported to build electric-light plant.

Ky., Whitesburg.—East Kentucky Power, Light & Saw Co. (W. C. Daniel & Son) will expend about \$6000 to construct electric-light plant; erect framed 30x40-ft. building; construction by the company; steam power. (Lately noted with franchise granted and machinery supplied.)

Md., Rising Sun.—City voted bonds to in-

stall electric-light plant. Address The Mayor.

Mo., Joplin.—City defeated \$225,000 bond issue to construct electric-light plant and proposition to grant franchise to Empire District Electric Co. for electric lighting; Hugh McIndoe, Mayor. (Lately noted.)

Okla., Alva.—Southwestern Utilities Co., capital \$500,000, inctpd. by Noel R. Gascho and W. A. Parr of Alva and Albert Emanuel of Dayton, O.

Okla., Temple.—City votes July 13 on granting franchise to John C. Keys of Lawton, Okla., to construct electric-light and natural-gas plant; electricity to be transmitted from plant at Lawton.

S. C., St. Helena Island, P. O. Frogmore.—MacDonald, Wilkins & Co., Beaufort, S. C., let contract to Georgia-Carolina Utilities Co., Whitaker and Harris Sts., Savannah, Ga., for installation of 400-light plant for operation with present water system; to furnish electricity and water for several stores, offices and residences; installation to consist of 240-amp.-hr. storage battery, with duplicate generating plant, and auxiliary heavy-duty fire pump for present water system and possible fire service.

Tenn., Fayetteville.—Fayetteville Electric Power & Light Co., capital \$60,000, inctpd. by H. Knox Bryson, W. J. Bunn, Wm. M. Smith and others.

Va., Portsmouth.—Bureau of Yards and Docks, Navy Department, Washington, D. C., let contract M. J. Roche to construct powerhouse; 97x156 ft. 8 in. inside measurements; 3 stories; concrete and steel; appropriation \$232,000. (Lately noted.)

### FERTILIZER FACTORIES

Ga., Athens.—Southern Cotton Oil Co. purchased Georgia Phosphate Co.'s fertilizer factory; enlarge and improve.

lasses feed. (Lately noted to double capacity.)

Okla., Newkirk.—Producers & Consumers Milling Co., capital \$250,000, inctpd. by John Strong and Jas. Steven of Lawrence, Kan., and Le Roy Drak of Ponca City, Okla.

S. C., Columbia.—Adlun Milling Co., B. R. Cooner, Prest., will install machinery to grind velvet beans for stock feed; cost \$10,000; purchased machinery.

Tex., Beaumont.—Beaumont Cotton Oil Mill Co. will install mixed-feed mill. (See Miscellaneous Factories.)

Tex., Cleburne.—Cleburne Roller Mills Co., capital \$15,000, inctpd. by J. R. Nail, P. C. Gresham, J. E. Poindexter and others.

Va., Strasburg.—Strasburg Steam Flouring Mills increased capital from \$25,000 to \$50,000.

### FOUNDRY AND MACHINE PLANTS

Fla., St. Petersburg.—Machinery.—Pinellas Machine Co. increased capital from \$10,000 to \$50,000.

Fla., Tampa.—Heaters.—Sunray Solar Heater Co., capital \$50,000, inctpd.; E. Cunningham, Prest.-Treas.; J. H. Fessenden, V.-P.; W. J. Regar, Secy.; has plant with monthly capacity 100 heaters.

Md., Frederick.—Machinery, Tools, etc.—Frederick Iron & Steel Co., capital \$150,000, inctpd. by Wm. A. Riddell, Geo. M. Gittinger and Claude S. Hahn.

Mo., Kansas City.—Railway Cars.—Kansas City Railways Co. will install machinery in repair shops at 9th St. and Lister Ave. to build its own cars; Arthur T. Hunt, Consult. Engr., Chicago, is preparing plans.

N. C., Charlotte.—Textile Machinery.—Terrell Machine Co., capital \$25,000, organized with E. A. Terrell, Prest.-Treas.; C. S. Smart (Supt. Locke Cotton Mills, Concord, N. C.) V.-P. and Secy.; manufacture quil-

J. E. Eldridge, W. F. Smith and R. L. Comstock.

Okla., Ada.—Fossil-Rock Petroleum Co., inctpd. by J. Edgar Smith, C. H. Stone and John H. Asbury; capital \$100,000.

Okla., Ardmore.—Newberry Oil Co., inctpd. by Porter Newman, Durant; J. H. Barker and Abe Gross, Waco, Tex.; capital \$100,000.

Okla., Ardmore.—Liberty Bond Oil & Gas Co., capital \$100,000, inctpd. by J. T. Eggleston, R. R. Thomas and Lee Riddleman.

Okla., Berwyn.—Montana Oil & Gas Co. inctpd. by A. W. Gaines, F. W. Fisher and B. L. Rodgers; capital \$25,000.

Okla., Claremore.—Old Ben Oil Co., capital \$20,000, inctpd. by Perry D. Stille and F. E. Webb of Claremore and D. B. Buchanan of Chicago.

Okla., Davis.—Shaffer-Vaughn Oil & Gas Co., capital \$100,000, inctpd. by T. H. Slover, R. A. Vaughn and B. Wolf.

Okla., Duncan.—Three-in-One Oil & Gas Co., capital \$50,000, inctpd. by J. C. McCasland, T. B. Reeder and H. A. Furst.

Okla., Durant.—Perkins-Johnson Oil Co., capital \$40,000, inctpd. by S. A. Whale, Frank Lewis and Charles R. Allen.

Okla., Enid.—Tulsa-Enid Oil & Gas Co., capital \$10,000, inctpd. by E. W. Shepard of Enid, B. R. Beezley and E. M. Knode of Wichita, Kan.

Okla., Lawton.—Comanche Refining Co., C. B. Hale, Secy., will conduct refinery only, at present. Lately noted chartered, capital \$65,000. (See Machinery Wanted—Pipe, Tanks, etc.)

Okla., Miami.—Pipe Line.—Quapaw Gas Co. is making surveys to construct 16-in. gas mains through entire Ottawa county mining district; now furnishes Miami and will extend service to Commerce, Picher, Cardin, Century and other camps.

Okla., Muskogee.—T. O. Petroleum Co., capital \$300,000, inctpd. by F. E. Goss and E. C. Motter of Muskogee and A. A. Streit of Knoxville, Tenn.

Okla., Muskogee.—Terriokla Oil & Gas Co., capital \$25,000, inctpd. by F. D. Hudson, Herbert Gibson and John Wheeler.

Okla., Oklahoma City.—Favorite Oil Co., capital \$300,000, inctpd. by R. C. Herbert, J. B. Helton, W. K. Cruce and S. L. Sturgeon.

Okla., Oklahoma City.—Allies Oil Co., capital \$1000, inctpd. by R. McAllister and others.

Okla., Oklahoma City.—Golden Quest Oil Co., capital \$100,000, inctpd. by P. L. Mulky, O. B. Kee and S. P. Perry.

Okla., Oklahoma City.—Holbeck Oil Co., capital \$200,000, inctpd. by Eli Brown and Chas. A. Glass of Oklahoma City, and J. A. Beckman of Denver, Col.

Okla., Oklahoma City.—Oklahoma Victor Oil Co., capital \$30,000, inctpd. by Eli Brown and Chas. A. Glass, both of Oklahoma City, and P. K. Orrison of Victor, Col.

Okla., Sapulpa.—Alkanah Oil Co., capital \$50,000, inctpd. by C. C. Cantrell, S. J. Smith and S. N. Patrick.

Okla., Temple.—City votes July 13 on granting franchise to John C. Keys of Lawton, Okla., to construct natural-gas and electric-light plants; gas to be supplied from well northeast of Temple.

Okla., Tulsa.—Animo Oil & Gas Co. inctpd. by M. A. Isaacs, Tulsa; Henry M. Coppock, Kansas City, Mo.; D. U. Ruckel, Wichita, Kan.; capital \$100,000.

Tex., Burkburnett.—High Grade Oil Co., capital \$20,000, inctpd. by R. L. Brown and J. E. Lyle of Burkburnett and R. E. Carrington of Plainview.

Tex., Houston.—Atkinson Oil Co., capital \$50,000, inctpd. by E. S. Atkinson, W. P. Baker and others.

Tex., Port Arthur.—Texlor Oil Co., capital \$59,600, inctpd. by W. H. Gilliland, W. T. Huffnal and J. W. Williams.

Tex., Rockdale.—Brushy Creek Petroleum Co., capital \$5000, inctpd. by Lucian D. Ross, R. W. Wallis and W. C. Marra.

Tex., Waco.—Peso Oil Co., capital \$25,000, inctpd. by H. C. Miller, A. F. Loveland and P. A. Watson.

Tex., Wichita Falls.—South Archer Oil Co., capital \$40,000, inctpd. by J. J. Perkins, R. O. Harvey and F. P. Timberlake.

Va., Hampton.—Hydrogen Gas Plant.—War Dept., Washington, D. C., will build hydrogen-gas plant, manufacturing gas for dirigible balloons, on Langley Aviation Experimental Station and Proving Grounds; let construction contract at \$379,856.46 to Improved Equipment Co., New York; plant will include: Hydrogen generating building; flash charging building; steam boiler plant; blue-gas generator; No. 6 horizontal posi-

## THE OFFICIAL PROPOSAL ADVERTISEMENTS

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Send for booklet of testimonial letters from public officials who have used the PROPOSAL department of the Manufacturers Record, for bond sales, construction work, etc.

S. C., Charleston.—Charleston Mining & Mfg. Co. will build plant with annual capacity 25,000 tons South Carolina ground phosphate rock.

S. C., Trenton.—Trenton Fertilizer Co., increased capital from \$7000 to \$21,000.

### FLOUR, FEED AND MEAL MILLS

Ga., Cordele.—Dixie Seed Farms, J. R. Kelly, Propr., will install feed-grinding machinery. See Miscellaneous Enterprises. (See Grain Elevator and Cleaning Machinery, etc.)

Ga., Boston.—R. B. and C. R. McRae plan to install corn and velvet bean mill and pulverizer.

Ga., Douglas.—Douglas Oil & Fertilizer Co., Box 606, purchased complete feed-mill equipment for lately-noted plant; has building.

Ky., Bardwell.—Harlan-Lowe Milling Co., W. H. Harlan, Prop., will rebuild plant damaged by tornado; cost \$3000.

La., Kentwood.—Kentwood Creamery, C. A. Kent, owner, will install grist mill in connection with creamery, etc. (See Miscellaneous Factories.)

Mo., Pierce City.—J. W. Vance Milling Co., inctpd. by E. C. Vance, J. V. McReynolds and Mary E. Martin.

N. C., Cleveland.—Rowan Milling Co. chartered by J. A. Lyerly, C. A. Bunn and W. W. Riseman; capital \$50,000.

N. C., Wendell.—Geo. H. Wright plans organizing company to install flour mill. (See Machinery Wanted—Flour Mill.)

Okla., Muskogee.—Davidson Mill & Elevator Co., C. A. Davidson, Prest., will install alfalfa machinery and motors; has building; daily capacity 2000 bags alfalfa mo-

cleaning machinery and housings for ball bearings. (Lately noted inctpd.)

N. C., Henderson.—Iron Works.—Vance Iron Works, capital \$50,000, inctpd. by C. A. Woodlief, E. T. Vickers and J. A. Short.

Okla., Cushing.—Tanks.—American Tank Co., capital \$60,000, inctpd. by Howard Hannah and Jay P. Walker of Cushing and J. V. Sheltis of Cleveland, Okla.

Va., Newport News.—Machine Shop.—E. V. Flowers plans to build machine shop.

W. Va., Dunbar.—Railway Safety Device.—Railway Safety Device & Tool Co., capital \$600,000, inctpd. by R. E. Jackson and E. G. Livesay of Princeton, W. Va.; W. H. Rardin of Beckley, W. Va., and others.

W. Va., Huntington.—Cars.—American Car & Foundry Co. will rebuild blacksmith shop and machine shop No. 1 reported burned at loss of \$30,000.

### GAS AND OIL ENTERPRISES

Ky., Ashland.—Ashland Oil Co., capital \$10,000, inctpd. by T. A. Null, J. E. Wilkins and Charles F. Higgins.

Ky., Irvine.—Irvine Kentucky Oil Co., capital \$1,000,000, inctpd. by Arnold M. Steinberg of Lexington, Ky., John H. Wayne, Chester C. Mercury, John H. McBride and Abram A. Voorhess, all of New York.

Miss., Moss Point.—Atlas Oil Co. will drill additional (second) well on West Pascagoula River.

Mo., Kansas City.—Union Oil & Investment Co., capital \$300, inctpd. by J. Jacobstein, Harry Rothschild and Fred Goldman.

Mo., Kansas City.—Oil Refinery.—Smith Oil & Refining Co., capital \$150,000, inctpd. by



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tive-pressure blower for blue gas; blue-gas exhauster; blue-gas holder of 25,000 cu. ft. capacity; blue-gas scrubber; blue-gas meter; multiple vertical retort-type hydrogen furnace with hydraulic main and scrubber; hydrogen-gas exhauster; hydrogen-gas holder of 200,000 cu. ft. capacity for 15x12-ft. oxide purifiers for blue gas; hydrogen-gas relief holder of 5000 cu. ft. capacity; four 10x6-ft. hydrogen-gas purifiers; 2 steam hydraulic elevators; capacity 3500 cu. ft. per hr. when operating 22 hrs. daily, with provision for increasing to 7000 cu. ft. per hr.; this plant to connect with Back River through dock and railway; contract let at \$22,000 to Vaughan Construction Co. of Shawsville, Va.  
Va., Norfolk—Oil Station.—Red "C" Oil Mfg. Co., 410 Keyser Bldg., Baltimore, Md. purchased 11½-acre site on which to build plant.

W. Va., Parkersburg.—Economy Oil Co., capital \$12,500, inctpd. by J. M. Helm, John J. Shore, N. E. Gribble and others.

## ICE AND COLD-STORAGE PLANTS

La., Kentwood.—Kentwood Creamery, C. A. Kent, owner, will install ice factory and cold-storage plant in connection with creamery and manufacture of ice-cream. (See Miscellaneous Factories.)

Md., Annapolis Junction.—Quartermaster-General's Dept., Washington, D. C., will install ice plants in connection with establishment of training camp; Col. I. W. Littell, Washington, in general charge.

Miss., Columbus.—Chamber of Commerce is promoting establishment of cold-storage plant.

Miss., Parchman.—Mississippi State Penitentiary Trustees, Jackson, Miss., L. Q. Stone of Tupelo, Miss., Prest., will erect building by convict labor; install 5-ton ice plant, cost \$3958, for Sunflower plantation; building plans by H. W. Farham, Parchman; machinery purchased. (Lately noted, under Miss., Jackson.)

N. C., Asheboro.—W. D. Stedman may install ice plant. (See Machinery Wanted—Ice Machinery.)

Tenn., Fayetteville.—Fayetteville Ice Co., capital \$60,000, inctpd. by H. Knox Bryson, Hugo D. Smith, J. A. Moores and others.

## IRON AND STEEL PLANTS

Ga. Rome.—Iron Furnace.—Matthews Iron & Steel Co. chartered with \$1,000,000 capital; Harry S. Matthews, Prest.; J. W. Porter, V.-P.; Y. A. Dyer, Secy., Treas. and Gen. Mgr.; A. H. Gibson, Supt.; succeeds Matthews Iron & Mining Co.; operates iron furnace, iron mines, etc.; leased 640 acres iron and manganese land, with \$75,000 plant, for additional ore supplies. (Furnace improvements costing \$30,000, installation of \$40,000 mining equipment, etc., previously noted.)

Tenn., Bon Air.—Iron Furnaces, etc.—Bon Air Coal & Iron Corp. will organize with \$10,000,000 capitalization; Alex. R. Peacock, Prest.; John McE. Bowman, Treas. and Chrmn. of Directors; both of New York; A. J. Moreland, Secy. and Gen. Mgr., Pittsburgh, Pa.; W. J. Cummins, V.-P. and Sales Mgr., Nashville, Tenn.; acquire Bon Air Coal & Iron Co. properties; include 2 iron furnaces, each with daily capacity 100 tons; 55,000 acres coal and timber land on Cumberland Plateau in Caney River Fork section, 27,000 acres virgin timber in Wayne County, 50,000 acres brown iron ore land in Dickson, Hickman and Lewis counties, coal and iron mines, etc.; new company plans thorough developments; improve furnaces and add 2 stoves to 6 now operated; increase Allens Creek coal mine capacity to 200 tons daily; enlarge commissary and otherwise provide for additional employees; install new machinery and other equipment for coal mines at Bon Air, Ravenscroft and Eastland; develop additional drift mines on coal lands, with view of increasing coal production to 10,000 tons daily; repair and operate 200 beehive coke ovens; install sawmills to cut timber for market. (Supersedes recent announcement regarding Bon Air properties.)

W. Va. Belle.—Alloy Steel.—Charleston Alloy Steel Co. chartered with \$500,000 capital by J. F. Bouchelle, Berkeley Minor, Jr., E. A. McCoy and G. P. Brennan, all of Charleston, W. Va.; J. F. Bouchelle wires Manufacturers Record: Organize to acquire Charleston Steel Co.; no plans or details can be announced yet.

## LAND DEVELOPMENTS

Ark., Little Rock.—Army Post Development Co. organized with \$300,000 capital; Ed. Cornish, Prest.; Moobhead Wright, V.-P.;

A. D. Cohn, Secy.-Treas.; plans to purchase 3000 acres of land and secure leases on additional 10,000 acres for improvements necessary in connection with establishment of United States Army Post; improvements to include railway extensions, land clearing, warehouse construction, etc.

Ga., Moultrie.—St. Simons Island Cotton Co., capital \$6000, inctpd. by H. H. Rothe, C. L. Brooks and others to grow sea-island cotton, etc.

N. C. Liberty.—Camden Point Orchards Co., capital \$13,500, inctpd. by F. H. Mathews, John R. Harrigan and R. S. Mahan.

W. Va., Huntington.—Slab Fork Land Co., capital \$25,000, inctpd. by Leon S. Wiles, G. D. Miller, H. B. Hagen and others.

## LUMBER MANUFACTURING

Ark., Star City.—Hudgeon Lumber Co., organized; Richard Reid, Secy.; install pine mill of 25,000 ft. daily capacity; cost \$3000. (See Machinery Wanted—Sawmill Equipment.)

Ark., Willow.—Liberty Lumber Co., capital \$25,000, inctpd. by B. L. Van Cleave (V.-P.) and Gen. Mgr. Van Cleave Sawmill Co., 717 Fullerton Bldg., St. Louis, Mo.) and others; Mr. Van Cleave states: Incorporated to manufacture 10,000,000 to 12,000,000 ft. timber; have small sawmill outfit, which will remove to timber tract.

Fla., Live Oak.—Econpena Lumber Co. will rebuild sawmill, planing mill and shingle mill burned at loss of \$100,000.

Ga., Savannah.—Pine Products Export Co., 204 American Bank & Trust Bldg., advises Manufacturers Record: Organized to deal in pine products, including tar, tar and pine oils, rosin, turpentine, etc.; expect to deal in lumber and timber, but will not manufacture. Lately noted inctpd., capital \$25,000, by Julius C. Schwarz and Anton P. Wright. (See Machinery Wanted—Bottles and Cases.)

Miss., Meridian.—Algonquin Lumber Co., capital \$30,000, inctpd. by E. D. Ward and H. R. Stone of Meridian and J. K. Harper of New Orleans, La.

Mo., St. Louis.—Liberty Lumber Co. will develop timber tract at Willow, Ark.; lately noted inctpd., capital \$25,000. (See Ark., Willow.)

Mo., St. Louis.—Willhite Lumber Co., capital \$50,000, inctpd. by Wm. L. Henry, Chas. G. Bufum and Harry M. Willhite.

Tex., Stark.—Wier-Reynolds Lumber Co. organized; R. W. Wier, Prest.; J. W. Reynolds, V.-P.; T. P. Wier, Treas.; J. B. Reynolds, Secy.; all of Houston, Tex.; cut Luther-Moore timber stumpage; construct 30-mi. standard gauge railway, under separate organization with B. F. Bonner, Prest., Houston; build mill with daily capacity 200,000 ft. lumber, but begin manufacturing with daily cut 200,000 ft.; manufacture by-products from waste; build water-works, lighting plant, ice factory, dwellings, church, school, etc., for industrial city; property consists of 90,000 acres virgin long leaf yellow pine in Newton, Sabine and Jasper counties; manufacture for domestic and foreign markets. (Lately noted planning this development, general details being then outlined.)

Va., Newport News.—C. & H. Lumber Co., capital \$15,000, inctpd.; C. S. Creelman, Prest.; W. J. Nelms, Secy.-Treas.

## METAL-WORKING PLANTS

Mo., Kansas City.—Metal Doors, etc.—Bolin Metallic Door Co., A. H. Barber (of Barber Investment Co.), Prest., leased 2-story building, 75x120 ft., at 1613-17 Crystal Ave.; will equip to manufacture sheet metal doors, window frames, etc.

N. C., Wilmington.—Stamped Products.—Metal Stamping Co. organized; Frank Meier, Mgr.; build 2 adjoining factories; manufacture bakers' and confectioners' utensils, cans, etc.; install model canning plant; W. H. Bank, Engr., Wilmington, will prepare plans and specifications. (Lately noted inctpd. with \$200,000 capital.)

## MINING

Ala., Ashland.—Graphite.—Southern Star Graphite Co. will rebuild burned plant.

Ala., Ashland.—Gulf State Graphite Co., 3 S. 20th St., Birmingham, Ala., organized; Dan S. Martin, Prest.; Geo. R. Simcox, V.-P.; J. M. Hughes, Secy.-Treas.; W. C. Martin, Constr. Engr.; all of Birmingham; develop 200 acres; purchased machinery; (Lately noted inctpd., capital \$200,000.)

Ala., Ashland.—Graphite.—Republic Graphite Co. organized; W. C. Clark, Jasper, Ala., Prest.; H. E. McCormack, V.-P.; Carr McCormack, Secy.-Treas.; both of Birmingham, Ala.; A. P. Smith, Ashland, Mgr.; develop 100 acres; daily capacity 200 tons; J. Q. Barr, Mt. Pleasant, Tenn.; Constr. Engr.; now receiving mining machinery bids; cost of machinery about \$35,000. Lately noted inctpd., capital \$100,000. (See Machinery Wanted—Mining Machinery.)

Ala., Ashland.—Graphite.—K. G. Rowland and others will erect mill-construction buildings, cost \$40,000, and install graphite milling machinery; now receiving machinery bids. Lately noted as planning to develop 220 acres graphite land. (See Machinery Wanted—Graphite Milling Machinery.)

Ala., Birmingham.—Alabama Exploration Co. chartered with \$200,000 capital by Clement M. Egner of Elkton, Md., and others.

Ala., Jamestown.—Lead.—Jamestown Lead Mining Co. (care of Cherokee Mineral Co., American Trust Bldg., Birmingham) organized with J. T. Robinson, Prest., Montgomery; J. E. Ellis, V.-P.; W. H. Willson, Secy.-Treas.; both of Birmingham; install machinery and develop several hundred acres lead deposits in Cherokee County.

Ala., Oxford.—Ochre, etc.—Hargrave-Mandeville Paint & Mining Co., J. T. Mandeville, Secy.-Treas., Gadsden, Ala., will develop sienna, umber and ochre. Lately noted contemplating mining paint pigments. (See Miscellaneous Factories, Ala., Gadsden.)

Ark., Ruddells.—Sand.—Arkansas Lime Co. contemplates building \$25,000 plant to grind glass sand.

Ga., Macon.—Bauxite, etc.—Georgia Realty, Mining & Mfg. Co., U. R. Hatfield, Prest., and W. S. Dedrich, Mgr., Georgia Casualty Bldg., will develop 1688 acres bauxite, 1150 acres kaolin and 500 acres fuller's earth; daily capacity 60 tons bauxite, 120 tons kaolin and 60 tons fuller's earth; install grinding, drying and pressing (clays) machinery, boilers, engines and pumps. (See Machinery Wanted—Clay Grinding, Drying and Pressing Machinery, etc.)

Ky., Trammell.—Phosphate Rock.—R. B. Moore plans to develop phosphate rock deposits.

Mo., Joplin.—Lead and Zinc.—Republic Mining Co. plans mining operations; build 2 and possibly 3 mills; install horizontal boiler and compressor.

N. C., Greensboro.—Sand and Stone.—Piedmont Sand & Stone Co., capital \$25,000, inctpd. by Frank L. DeVane, Box 571, Greensboro; A. F. Messick and R. C. Humphries of Winston-Salem, N. C.; will produce sandstone and gravel for buildings and sand for foundries, fertilizer filler, etc.; is completed.

Tenn., Centerville.—Phosphate.—Totty Phosphate & Mining Co., S. M. Ward, Mgr., will rebuild burned plant; also leased Volunteer Phosphate Co.'s plant, damaged by storm, and is making repairs; has options on additional phosphate property; will increase output.

## MISCELLANEOUS CONSTRUCTION

Ark., Bridge Junction.—Levee.—St. Francis Levee Dist. of Arkansas, H. D. Tomlinson, Prest., and Eugene Williams, Secy.-Treas., will issue \$400,000 bonds (of \$1,500,000 authorized by Legislature) for enlargement of levee along Mississippi River.

Fla., Fort Pierce.—Dock.—Gulf Refining Co., W. B. Lamb, Supt., Jacksonville, will erect dock and warehouse; former to be 1100 ft. long, 5 ft. above high water; latter to be 50x80 ft., with hippodrome roof; cost \$7000.

Miss., Vicksburg.—Third Mississippi River Dist., P. O. Box 404, will construct 1,365,000 cu. yds. levee work; bids until July 11. (See Machinery Wanted—Levee Construction.)

Tex., Fort Worth.—Racetrack.—W. N. Moore, Hubb Diggs, Henry Lewis and others are interested in plan to build ½-mi. board track for motorcycle races; Jack Prince of Los Angeles, Cal., submitted plans; estimated cost \$10,000.

Va., Hampton.—Dock and Railway.—War Dept., Washington, D. C., let contract at \$22,000 to Vaughan Construction Co., Shawsville, Va., to build dock and railway. (See Gas and Oil Developments.)

Va., Hampton.—Hangars.—War Dept., Washington, D. C., is having plans prepared for construction of 4 hangars for dirigible balloons; hangars to be 1000 ft. long and 12 stories high, with opening doors 150x150 ft.; located 3000 ft. from gas plant and connected by railroad; John Sloan, Hampton, in charge of general construction for this station; Capt. Barhoff is purchasing officer.

## MISCELLANEOUS ENTERPRISES

Fla., Jacksonville.—Metals, etc.—Peninsular Metal Co., capital \$50,000, inctpd.; Percy W. Zacharias, Prest.; I. A. Zacharias, V.-P.; Laurence Zacharias, Secy.-Treas.

Ga., Cordele.—Seeds, etc.—Dixie Seed Farms, J. R. Kelly, Prop., 8th and 14th Ave., will erect 50x50-ft. addition (making total of 50x150 ft.) for storing, cleaning and preparing grains, peas, beans and peanuts for seed purposes; cost of building without equipment, \$3000 to \$5000; brick and corrugated iron; tin and composition roofing; double floors; electric lighting; may use electric power; install equipment, including unloading machinery. (See Machinery Wanted—Grain Elevator and Cleaning Machinery, etc.)

Mo., Kansas City.—Electrotype.—Central Electrotype Co., capital \$30,000, inctpd. by C. A. Brown, John C. Grover and Warren N. Groff.

Okla., Cheyenne.—Printing.—Roger Mills Sentinel Printing Co., capital \$6000, inctpd. by R. A. Mitchell, B. D. Cooksey and Perry Madden.

Okla., Tulsa.—Construction.—Cannady Construction Co., capital \$25,000, inctpd. by M. L. Cannady, Woodson E. Norvell and Walter Chitwood.

Okla., Tulsa.—Contracting and Engineering.—Gasoline Plant Construction & Engineering Co., capital \$5000, inctpd. by Kerk Kelley, F. A. Elchens and H. O. Bland.

Okla., Tulsa.—Fire Alarm System.—City votes June 28 on \$1,042,500 bonds, to include \$35,000 to enlarge fire alarm system, install additional alarm boxes in business and residential section and complete equipments in West Tulsa and Kendall. John H. Simmons, Mayor.

Tex., Fort Worth.—Grain Elevators.—Fort Worth Elevators Co. increased capital from \$250,000 to \$750,000.

Tex., Groom.—Grain Elevator.—Groom Elevator Co. organized; John Fraser, Prest.; John W. Knorpp, V.-P.; C. R. Slay, Secy.; let contract to B. J. Carico, Fort Worth, Tex., to build ironclad elevator, 30,000-bu. capacity; install oil engine. (Lately noted inctpd., capital \$20,000.)

Va., Norfolk.—Steamship Line.—Powhatan Steamship Co., capital \$400,000, inctpd.; Robt. T. Hasler, Prest., Norfolk; Alvert V. Moore, Secy., Forest Hills, N. Y.

Va., Richmond.—Cleaning.—Sickel Cleaning Co. increased capital from \$18,000 to \$50,000.

## MISCELLANEOUS FACTORIES

Ala., Birmingham.—Clothing.—Phillips-Lester Mfg. Co., authorized capital \$150,000, incorporated to manufacture clothing and overalls.

Ala., Blossburg.—Bottling.—Pioneer Coca-Cola Co., capital \$10,000, inctpd.; Crawford Johnson, Prest.; Frank B. Fowlkes, V.-P.; Geo. H. Davis, Secy.-Treas., all of Birmingham.

Ala., Gadsden.—Paint.—Hargrave-Mandeville Paint & Mining Co. will manufacture roofing, metallic smokestack and bungalow paint and shingle stain; may later install electrically-equipped grinders, etc.; present machinery needs are supplied by machinery removal from old plant; develop sienna, umber and ochre, with mines at Oxford, Ala. (Lately noted inctpd., capital \$50,000; E. S. Jones, Prest.; J. B. Hargrave, V.-P. and Gen. Mgr.; J. T. Mandeville, Secy.-Treas.)

Ala., Mobile.—Turpentine.—Taylor Turpentine Co., capital \$100,000, inctpd. by S. and A. Lowenstein, Thos. J. Taylor and H. C. Taylor.

Ala., Mobile.—Red J Mfg. Co., capital \$10,000, inctpd.; J. Virgil Smith, Prest. and Gen. Mgr., Birmingham; W. W. Hines, V.-P., Bowling Green, Ky.; W. H. Beard, Secy.-Treas., Mobile.

Ark., Camden.—Bottling.—C. S. Gordon will install bottling equipment.

Ark., Morrilton.—Bakery.—A. L. Barrier of Conway, Ark., will establish bakery.

D. C., Washington.—Nautical Instruments.—Bureau Yards and Docks, Navy Department, will build addition to nautical instrument repair shop; bids until June 25; addition having brick walls, plain concrete footings for column bases, reinforced concrete floor and roof slabs, wood floors on sleepers and cinder fill, steel columns and beams, and pitch, felt and gravel or slag roof covering; at Naval Observatory; drawings and specifications (No. 249) upon application to Bureau.

Fla., Tampa.—Fruit Syrups.—Florida Syrup Co. organized with \$250,000 capitalization;

Howard Cary, Prest.; C. N. Adkinson, V.-P.; Frank L. Cooper, Secy.; owns 2700 acres land on river near Ellenton; plans improvements to include cultivation for fruit. construction of dock, erection of fruit syrup factory, etc.

Ga., Athens—Popcorn.—E. R. Knott of Knott Machine Co. is reported as organizing company to manufacture popcorn.

Ga., Atlanta—Paint.—Palladium Paint Co. organized; N. T. Poole, Mgr.; Geo. R. Strickle, manufacturing chemist; J. J. Simpson, sales manager; has plant in operation; no machinery needed at present. (Lately noted inceptd., capital \$25,000.)

Ga., Savannah—Peanut Products.—Dixie Peanut Products Co. organized with J. L. DuBreuil, Prest., Boston, Mass.; E. K. Thomas, Secy.-Treas., Savannah; manufacture peanut products.

Ky., Franklin—Overalls.—Franklin Overall Mfg. Co., capital \$30,000, inceptd. by E. L. Norwood & Co., Harris & Crowds, W. B. Ferguson, J. C. McClean and J. B. Finn.

Ky., Lexington—Bottling.—Lexington Syrup & Beverage Co., capital \$10,000, inceptd. by Wm. E. Beheler, W. A. Beheler and others.

La., Kentwood—Creamery.—Kentwood Creamery, C. A. Kent, owner, will rebuild plant destroyed by fire; erect brick and concrete fireproof buildings; add ice factory, cold-storage plant, ice-cream factory and grist mill.

Md., Baltimore—Buggy Tops, etc.—Baltimore Buggy Top Co., 107 W. Mt. Royal Ave., will have plans prepared by Clyde N. Friz, 1523 Munsey Bldg., Baltimore, for factory on Calvert St. between Mt. Royal Ave. and Preston St.; fireproof; 75x152 ft.; 3 stories.

Miss., Meridian—Cellulose.—Meridian Cellulose Co., capital \$50,000, inceptd. by T. U. Cole and T. R. Cole.

Mo., St. Louis—Grocery Sundries.—Evans-Rich Mfg. Co., capital \$25,000, inceptd. by Gwynne Evans, B. Rich, Sidney Rich and others.

Mo., St. Louis—Garments.—Consolidated Garment Co., 1324 Washington Ave., capital \$12,000, inceptd. by Albert J. Edlin, Alter Edlin and Chas. Kotkin.

N. C., Albemarle—Bottling.—Albemarle Bottling Co., capital \$20,000, inceptd. by D. H. Hall of Salisbury, A. P. Wilson of Greensboro and J. D. Earnhardt of Richfield.

N. C., High Point—Glass.—Ford-Elkin Glass Co. will build plant.

N. C., Mount Airy—Tobacco.—Hughes-George Tobacco Co., capital \$25,000, inceptd. by H. H. Wright and C. T. Joyce of Winston-Salem and R. A. George of Mount Airy, N. C.

S. C., Spartanburg—Ice-Cream.—Quality Ice-Cream Co. will enlarge plant. (Lately noted inceptd. with \$20,000 capital.)

Okla., Nowarth.—Lighting Tree Killer Mfg. Co., capital \$5000, inceptd. by John D. Hogue, D. R. Whiteman and R. L. McMillean.

Okla., Oklahoma City—Candy.—Sifers Candy Co., 517 Grain Exchange Bldg., has plans by Leonard H. Bailey, 616 Colcord Bldg., Oklahoma City, for candy factory; 5 stories; estimated cost \$65,000; 60x120 ft.; fireproof reinforced concrete construction; install candy-making machinery. (Noted in March.)

Okla., Tulsa—Cleaning Preparation.—Right Way Cleaners Co., capital \$5000, inceptd. by J. D. Ronder, C. E. Ronder and J. Allen Yeager.

Tenn., Chattanooga—Glass Caskets.—De Camp Glass Casket Mfg. Co., J. B. Witherington, Prest., Memphis, Tenn., will build \$225,000 plant for manufacturing indestructible air-proof glass burial caskets; purchased 15-acre site; ordered equipment of machinery.

Tex., Beaumont—Peanuts.—Beaumont Cotton Oil Mill Co. will erect 5-story peanut-shelling factory; daily capacity 5000 bu. peanuts; install mixed feed mill in connection.

Tex., Dallas—Caps.—Tucker Cap Mfg. Co., 715 Elm St., organized; Herman Tucker, Prest.; Harry Salzenstein, Secy.-Treas.; opened building proposals; install 8 sewing machines to manufacture golf caps. (Lately noted inceptd., capital \$10,000.)

Tex., Fort Worth.—Ralston Purina Co., capital \$500,000, inceptd. by C. H. Colvin, D. O. Modlin and N. H. Lassiter.

Tex., Fort Worth—Ties and Bagging.—G. W. Armstrong, South Hemphill St., and others will build tie and bagging factory; reinforced concrete construction; cost \$150,000; 600-acre site.

Va., Lexington—Clothing.—Lyons Mfg. Co., capital \$25,000, inceptd.; J. Lyons, Prest.; W. W. Wright, Secy.

Va., Lynchburg—Overalls.—Jobbers' Overall Co. let contract to C. W. Hancock & Son, Lynchburg, to erect 64x246-ft. reinforced concrete building, with slag roof and concrete floor; steam heat; freight elevator; cost of building, without equipment, \$70,000; install 480 sewing machines, electric motors, etc.; plans by Heard, Cardwell & Craighill, Lynchburg.

Va., Norfolk—Peanut Candy, etc.—American Peanut Corp. will erect plant to manufacture peanut candy, peanut butter and other peanut by-products.

Va., Norfolk—Ink, Mucilage, etc.—Jasmine Ink Co., capital \$100,000, inceptd. with J. W. Crumiaux, Prest.; R. L. Barr, V.-P.; I. J. Martin, Secy.; succeeds United Dealers' Buying Co., 2 Hall St.; will enlarge plant.

Va., Petersburg—Chemicals.—Dixie Chemical Corp., capital \$180,000, chartered; C. W. Stratford, Prest., New York; W. J. Sommers, Secy.-Treas., Petersburg.

Va., Richmond—Automobile Lighting.—Prest-O-Lite Co., Indianapolis, Ind., will establish branch plant.

Va., Roanoke—Vending Machines.—Southern Autos Co., capital \$50,000, inceptd.; F. M. Hughes, Prest.; J. P. Filippo, V.-P.; Victor D. Hardy, Secy.-Treas.

W. Va., Charleston—Bottling.—West Virginia Beverage Co. inceptd. with Jas. P. Clark, Prest. and Gen. Mgr.; Chas. Capito, V.-P.; D. W. Patterson, Secy.-Treas.; has plant.

### MOTOR CARS, GARAGES, TIRES, ETC.

Ark., Newport—Garage.—Hutson Barker Auto Co. organized; T. Hutson, Prest.; M. A. Stevens, V.-P.; Thos. Barker, Secy.; erect 77x142-ft. fireproof building; cost \$9000; open bids August 1; W. H. Snetser, Newport, to be contractor; plans by Mann & Stern, Little Rock, Ark.; install garage equipment, cost \$5000; open machinery bids July 15. (See Machinery Wanted—Garage Equipment.)

Fla., Fort Pierce—Garage.—Overland Garage Co. (H. F. McCullough and T. A. Taylor) will erect garage and salesroom; 2 stories; 59x180 ft.; reinforced concrete; concrete floor; iron or tile roof; cost of building \$9000, and of fixtures \$6000.

Fla., Jacksonville—Garage.—Atkinson Tire & Supply Co., 48 W. Adams St., R. L. Atkinson, Prest.-Mgr., and E. T. Atkinson, Secy., will occupy day package automobile garage, for which contract will be let to Buckman Fitchner Co. by Stockton Broome, owner, Atlantic National Bank Bldg., Jacksonville; ordinary construction, 105x60 ft. structure, cost \$3500. (Lately noted.)

Ga., Athens—Garage.—Commerce Motor Sales Co., Allen Rice, Mgr., will erect \$15,000 garage.

Ky., Cynthiana—Automobiles.—R. L. Terry Motor Car Co., capital \$3000, inceptd. by R. L. Terry, N. S. Terry and George W. Booher.

Ky., Owensboro—Tractor-Cultivator.—Franks Tractor-Cultivator Co., capital \$50,000, inceptd. by W. L. Franks, W. O. Hoskins and W. W. Wain.

Md., Cumberland—Automobile Tires, etc.—Kelly-Springfield Tire Co., Akron, Ohio, will soon complete final plans for \$2,250,000 manufacturing plant; ultimate annual capacity 200,000 tons of product; plant to cover 75 acres; mainly 4-story buildings of concrete and steel; separate structures for power plant and office; improvements to include industrial city with sewer system, waterworks, electric-light service, 60-ft. boulevard in front of plant, 1000-ft. retaining wall preventing possible future overflow of river; S. Diescher & Sons, Const. Engrs., Farmers Bank Bldg., Pittsburgh, Pa., advise Manufacturers Record: Plans for construction of Kelly-Springfield plant completed to extent that permits proceeding with concrete and foundation work, also construction of pump-house, machine shop and garage; soon expect to complete plans for main buildings; work involved will be subtle; separate grading, concrete, steel work, etc., from building construction; practically all machinery and power-plant equipment purchased. (Previously reported to build plant, etc.)

Mo., Kansas City—Garage.—Kate S. Cook will erect garage; 2 stories; brick; cost \$28,000.

Mo., St. Louis—Automobiles.—Mitchell Automobile Corp., capital \$25,000, chartered by Wm. A. C. Halwer, Clyde Gary and Wesley A. Slinger.

N. C., Conover—Garage.—P. E. Isenhour & Son are having plans prepared by Q. E. Herman, Hickory, N. C., for 40x70-ft. brick garage with concrete floor and composition roof.

Okla., Elk City—Garage.—Hedlund & Son will erect garage and automobile salesroom.

Okla., Healdton—Motor Cars.—Fleet Cooper Auto Co., capital \$20,000, inceptd. by Fleet Cooper of Healdton, Tom Cooper of Ardmore, Okla., and Ben Cooper of Wirt, Okla.

Okla., Muskogee—Automobiles.—Wright Motor Car Co. inceptd. by Archie Wright, Myrtle Wright and Nat. M. Mitchell.

Okla., Oklahoma City—Automobiles.—Midland Motor Agency Co., capital \$200,000, inceptd. by Paul M. Pope, J. W. Sanders and O. E. Jones.

Okla., Tulsa—Garage.—City votes June 25 on \$1,042,500 bonds, of which \$17,500 will be expended to erect garage and warehouse; John H. Simmons, Mayor.

Okla., Tulsa—Seepitt Motor Sales Co., capital \$5000, inceptd. by J. A. Secunde, G. E. Pitts and C. K. Barber.

S. C., Aiken—Automobiles.—Aiken Automobile Co., capital \$2000, inceptd. by Herbert E. Gyles, Cecil H. Seigler and L. B. Douglas.

Tenn., Knoxville—Automobiles.—Chalmers East Tennessee Co., capital \$15,000, inceptd. by D. I. Reed, Harman O. Acuff, C. S. Cunningham and Geo. M. Trotter.

Tenn., Memphis—Automobiles.—Union Motor Co., increased capital from \$40,000 to \$80,000.

Tex., Dallas—Garage.—R. E. Bramlett, 207 Scollard Bldg., Dallas, let contract to Munn Construction Co., Dallas, to erect 65x130-ft. mill-construction building; plans by C. O. Gill, Dallas. (Structure lately noted to cost \$22,000; ground floor to be occupied by Mitchell Electric Garage & Storage Battery Co.)

Tex., Giddings—Garage.—Ford Garage will occupy 100x50-ft. building to be erected by E. M. Collier; A. W. Fowles, Caldwell, Tex., Contr.; plans by Ford Motor Co., Houston, Tex.; brick structure, stucco; 3-ply roofing; concrete floor; indirect and flood lighting.

Tex., Texarkana—Automobiles.—Auto Sales Co., capital \$7500, inceptd. by H. T. Enderley of Texarkana, J. W. Sloop and G. S. Winn of Bowie, Tex., and others.

Va., Norfolk—Automobiles.—Beale & Sykes Motor Co., capital \$20,000, inceptd.; Jas. H. Sykes, Prest., Portsmouth; W. C. Beale, Secy.-Treas., Norfolk.

Va., Richmond—Garage.—P. J. Beattie will erect brick garage; cost \$4000.

### ROAD AND STREET WORK

Ala., Bessemer—City will pave with brick on concrete foundation 2d Ave. from 19th to 21st St.; bids until July 3; S. R. Batson, City Engr. (See Machinery Wanted—Paving.)

Ala., Birmingham—City will pave sidewalks under Improvement Ordinance No. 957-C; Julian Kendrick, City Engr., receives bids until June 19. (See Machinery Wanted—Paving.)

Ark., Clarendon—Monroe County Road Dist. No. 1 will issue \$250,000 bonds for road construction; the district contains portion of Memphis to Little Rock Highway; W. J. Parkes, Engr., Pine Bluff, Ark.

Ark., Little Rock—Quartermaster's Dept. plans to construct 40 mi. of roads at cantonment site, 5 mi. from city. Capt. Kenneth P. Williams, Post Quartermaster.

Ark., Little Rock—State Highway Com., Hugh R. Carter, State Highway Engr., completed surveys for proposed Little Rock-Batesville road to extend from Little Rock, through Argenta, Jacksonville, Cabot, Austin and other towns to Batesville, 130 mi.; completed plans for road from Jonesboro to Otwell, 15 mi. to cost \$100,000.

Fla., Dade City—Pasco County, Special Road Dist. No. 4, voted \$10,000 bonds to complete National Highway in that district to Hillsborough county line. Address County Commrs.

Fla., Gainesville—Alachua County Bond Trustees of Special Road Dist. No. 1, will meet in County Commissioner's office on June 28 to consider employing engineers to prepare plans for road and bridge construction provided by recently announced \$500,000 bonds; J. B. Howard, Clerk of Bond Trustees. (See Machinery Wanted—Road Engineers.)

Fla., Titusville—Brevard County Commrs. let contract Melbourne Development Co. to surface that portion of Melbourne-St. Cloud Dixie highway on county's side of St. Johns River.

Ga., Alma—Bacon County, T. B. Taylor, Ordinary, voted \$60,000 bonds for road improvements.

Ky., Danville—City will improve Main St. from 4th to 2d St. with wood block, sheet

asphalt, bituminous concrete and vitrified block; concrete sidewalks; bids until June 28; S. F. Crecellus, Engr., Danville; W. O. McIntyre, Mayor. (See Machinery Wanted—Paving.)

La., Lafayette—Lafayette Parish Police Jury will construct gravel roads and concrete bridges; State Highway Engr., New Orleans, Engr.; \$300,000 available. (Bonds for \$300,000 noted voted in March to construct and maintain gravel roads.)

La., St. Joseph—Tensas Parish will construct with earth Section No. 1 of St. Joseph-Winnboro Highway, 3.03 mi.; bids at office Board of State Engrs., Room 104, New Orleans, until July 2; Duncan Bule, State Highway Engr., New Orleans. (See Machinery Wanted—Road Construction.)

Md., Annapolis Junction—Quartermaster-General's Dept., Washington, D. C., will construct roads in connection with establishment of training camp; Col. I. W. Littell, Washington, in general charge.

Md., Baltimore—City will grade and pave with cement concrete alleys as listed in private alley contracts Nos. 42, 43 and 44; bids until June 27; R. M. Cooksey, Highways Engr. (See Machinery Wanted—Paving.)

Miss., Brookhaven—Lincoln County, Dist. 4, will improve 19.7 mi. roads; open bids July 5 at office R. W. McNair, Chancery Clerk, Brookhaven; C. F. Sherman, Engr., McComb, Miss. (See Machinery Wanted—Road Construction.)

Miss., Meridian—Lauderdale County Good Roads Com. of Dist. No. 1, C. W. Schamber, Chrmn., invite new bids until July 3 to apply bituminous-wearing surface on Causeville Rd., 45,000 sq. yds.; Poplar Springs Rd., 25,000 sq. yds., and Asylum Rd., 15,000 sq. yds.; J. T. Pinkston, Engr., Courthouse, Meridian; lately noted to have rejected bids. (See Machinery Wanted—Road Construction.)

Miss., Starkville.—Oktibbeha County, J. R. Long, Clerk, will construct roads, Supervisors Dist. 2 and 5; about \$100,000 available; bids until June 27; Engr. E. C. Thomas, Nash Bldg., Starkville. (See Machinery Wanted—Road Construction.)

Miss., Tunica.—Tunica County Supvrs., Dist. No. 1, Turner Williams, Chancery Clerk, will issue \$70,000 bonds for road construction.

Miss., Tunica.—Tunica County Supvrs., Dist. No. 2, Turner Williams, Chancery Clerk, will issue \$90,000 bonds for road construction.

Miss., Tunica.—Tunica County Supvrs., Dist. No. 3, Turner Williams, Chancery Clerk, will issue \$66,000 bonds for road construction.

Miss., Yazoo City.—Yazoo County Commrs., Supervisors' Dist. No. 3, T. H. Craig, Chrmn., ask bids until July 3 on road improvements, including 30 mi. clearing and grubbing, 30 mi. subgrade, 300,000 cu. yds. grading; 1134 lin. ft. 15-in., 2016 ft. 18-in., 1441 ft. 24-in. and 588 ft. 30-in. pipe; 190 cu. yds. plain and 280 cu. yds. reinforced concrete; 50,000 cu. yds. slag, gravel or stone; 212,000 sq. yds. asphalt surface; quantities approximate; G. R. Thomas, Engr., Yazoo City. (See Machinery Wanted—Road Construction.)

Mo., Caruthersville.—City let contract J. H. Hinerman of Springfield, Mo., at \$69,662.83 to construct 30,606 sq. yds. paving on concrete base with wearing surface of macadam and tarvia; also 23,000 lin. ft. concrete curb and gutter; J. M. McGinnis, City Clerk. (Lately noted inviting bids.)

Okla., Ada.—Pontotoc County Commrs. are reported to call election to vote on \$650,000 bond issue to construct roads and bridges.

Okla., Ada.—Pontotoc County Commrs. ordered election for July 14 to vote on \$650,000 bonds to construct 300 mi. sand-clay roads and concrete culverts and bridges on all State highways; portion of issue to be used to build bridge across South Canadian River.

Okla., Holdenville.—Hughes County, Bernard Township, defeated bonds for road construction. (Lately noted.)

Okla., Miami.—Ottawa County votes July 12 on \$400,000 bonds to construct rock and concrete roads. Address County Commrs.

Okla., Tulsa.—City votes June 25 on \$1,042,500 bonds, of which \$40,000 bonds will be expended to construct heavy traffic roadway from Main St. to north approach of new county bridge; John H. Simmons, Mayor.

Tenn., Johnson City.—City let contract Municipal Paving & Contracting Co., Greeneville, Tenn., to construct 25,000 sq. yds. paving, curb, gutter and sewers.



Tenn., Knoxville.—City, John W. Flenniken, Commr. Streets and Public Improvements, asks bids until June 26 for resurfacing 35,000 sq. yds. old brick pavement with sheet asphalt; J. B. McCalla, City Engr. (See Machinery Wanted—Paving.)

Tenn., Mountain City.—Johnson County, H. A. Donnelly, Secy. Pike Com.; J. A. Wills, Chrmn., rejected bids to grade and macadamize roads; Engr., C. M. Dulaney, Mountain City. (Bids lately noted for June 14.)

Tenn., Newton.—Newton County defeated bonds for road construction; W. E. Gray, County Judge, states will vote again in 60 days. (In May, noted to vote June 5 on \$100,000 bonds to construct roads in Precinct No. 1, including Deweyville.)

Tex., Hamilton.—City invites bids until June 21 for grading and surfacing, together with bridges, culverts and street crossings, on 3 mi. of streets; L. V. Reese, Engr., Hamilton and Hico, Tex. (See Machinery Wanted—Street Improvements.)

Va., Chase City.—City let contract to Central Construction & Supply Co., Commonwealth Trust Bldg., Harrisburg, Pa., and Richmond, Va., to construct concrete gutters, asphalt macadam (penetration); cost \$17,500.

Va., Covington.—City, E. B. Butler, Mayor, let contract to Central Construction & Supply Co., Commonwealth Trust Bldg., Harrisburg, Pa., and Richmond, Va., to construct sheet asphalt, brick paving, brick gutters; concrete curb and gutters, etc.; 50,000 yds. paving; curb and gutter, 28,000 ft. each. (Bids noted in May.)

Va., Franklin.—City let contract to Central Construction & Supply Co., Commonwealth Trust Bldg., Harrisburg, Pa., and Richmond, Va., to construct sheet asphalt and drainage, and concrete gutters; cost \$12,000. (Bids previously noted.)

Va., Hillsboro.—Carroll County is reported to vote August 23 on \$300,000 bonds to construct roads. Address County Commrs.

Va., Norfolk.—City will improve Church St. from Queen to Granby Sts.; Board of Control receives bids until June 20. (See Machinery Wanted—Paving.)

Va., Richmond.—City let contract to Central Construction & Supply Co., Commonwealth Trust Bldg., Harrisburg, Pa., and Richmond, Va., to pave sections of Hanover, Grace, Main and Perry sts.; 2-in. asphalt concrete top, 5-in. Portland cement concrete base; 10,500 sq. yds.; \$30,000 available. C. E. Bolling, City Engr. (Noted in May.)

Va., Stuart.—City contemplates street improvements; will call election to vote on \$10,000 bonds. Address The Mayor.

W. Va., Winfield.—Putnam County will construct 6 mi. road in Pocatalico Dist.; bids until July 9; Ernest Bruce, Road Engr., Poca, W. Va.; J. M. Henson, Clerk County Commrs. (See Machinery Wanted—Road Construction.)

## SEWER CONSTRUCTION

Ark., Little Rock.—Quartermaster's Dept. plans to construct 7 mi. of sewer and water mains; Supt. Kenneth P. Williams, Post Quartermaster.

D. C., Washington.—Dist. Commrs., Room 509 Dist. Bldg., will construct sewers; 550 lin. ft. 4 ft. 6-in. span masonry sewer, including timber and piling foundation; bids until June 21. (See Machinery Wanted—Sewer Construction.)

Ga., Atlanta.—City will construct sewer system to cantonment at Silver Lake; J. B. McCrary Co., Atlanta, will probably secure contract. (See Water-works.)

La., New Iberia.—Commrs. First Sewer Dist., Chas. L. Provost, Secy., rejected bids for construction sanitary-sewer system and disposal plant; will again open bids June 23; Xavier A. Kramer, Engr., Magnolia, Miss. Bids lately noted for June 12. (See Machinery Wanted—Sewer Construction.)

Md., Annapolis Junction.—Quartermaster-General's Dept., Washington, D. C., will construct sewers in connection with establishment of training camp; Col. I. W. Littell, Washington, in general charge.

Miss., Clarksdale.—City will construct sanitary sewer system comprising 4000 ft. 12-in. and 1600 ft. 8-in. vitrified sewer pipe, manholes, branches, etc.; bids until June 19; W. S. Bobo, City Engr. (See Machinery Wanted—Sewer Construction.)

Miss., Lambert.—City voted bonds to construct sewer system. Address The Mayor.

Miss., Lambert.—City asks bids for July 3 to construct 2 mi. sewers and a septic

tank. (See Machinery Wanted—Sewer Construction.)

Okla., Cordell.—City let contract Municipal Excavator Co., Oklahoma City, at \$42,000 to construct sewers.

Okla., Rush Springs.—City, Louis Leverett, Prest. Board Trustees, will construct sanitary sewers and water-works; bids until June 25; Engr., Mackintosh-Walton Co., 1022 State National Bank Bldg., Oklahoma City; \$25,000 bonds for sewers lately noted voted. (See Machinery Wanted—Water-works and Sewer Construction.)

Okla., Tulsa.—City votes June 28 on \$1,042,500 bonds, of which \$80,000 will be expended to construct sanitary and storm sewers in West Tulsa, Kendall and other additions; John H. Simmons, Mayor.

S. C., Bishopville.—City let contract Sullivan, Long & Haggerty, Bessemer, Ala., at \$43,073 to construct sewers and water-works; includes 31,520 lin. ft. 8-in., 3900 lin. ft. 12-in. and 7395 lin. ft. 15-in. cast-iron pipe; flush tanks; 1451 cu. yds. fill; reinforced concrete sedimentation tank, etc.; J. B. McCrary Co., Engr., Atlanta, Ga. (Lately noted inviting bids.)

S. C., Spartanburg.—City voted \$40,000 bonds to extend sewer system. J. F. Floyd, Mayor. (Lately noted.)

Tenn., Chattanooga.—City will construct storm-water sewer in Orange Grove Dist.; bids until June 25; bids on construction entirely of brick masonry; in part of plain concrete and in part of brick; also of reinforced concrete pipe combined with brick tunnel section, brick manholes and brick junction; E. D. Bass, Commr. Dept. of Streets and Sewers. (See Machinery Wanted—Sewer Construction.)

Tenn., Johnson City.—City let contract Municipal Paving & Contracting Co., Greenville, Tenn., to construct sewers, etc. (See Road and Street Work.)

Tex., Bryan.—City let contract Bryan Construction Co. at \$12,115.57 to construct sewage-disposal plant; John M. Lawrence, Mayor. (Lately noted inviting bids.)

Tex., Port Arthur.—City Com. authorized City Clerk to invite bids on sewer extensions provided for in bond issue previously authorized; specifications provide for 56,000 ft. 8-in., 13,000 ft. 10-in., 7000 ft. 12-in. and 6000 ft. 15-in. vitrified pipe, 5000 ft. cast-iron force mains, 80 manholes, 125 clean-outs, ejector station, pumping station and collector well. (Noted in April.)

W. Va., Huntington.—City, O. H. Wills, Commr. Streets, etc., let contract to Amos Trainer, 2045 4th Ave., Huntington, for 1940 ft. 12-in. and 1210 ft. 10-in. sewer; also 11 manholes at \$30 each; cost of construction \$2947. (Bids lately noted; A. B. Maupin, City Engr.)

## SHIPBUILDING PLANTS

Fla., Jacksonville.—J. F. Cushman, Philadelphia, Pa., and others propose to construct shipbuilding plant.

Fla., Palatka.—N. T. Hageman Co., Max Germain, Prest., New York, will construct shipbuilding plant on river front; secured site; has Government contract for building vessels, as basis of plant.

Ga., Brunswick.—United States Maritime Corp., chartered by Geo. F. Jebbitt (120 Sherman Ave.), Allen E. Moore (20 Arden St.), both of New York, and F. H. Betchorn (764 St. Johns Place), Brooklyn, N. Y. (Lately noted chartered with \$2,500,000 capitalization.)

La., Madisonville.—Jahncke Shipbuilding Co., chartered with \$50,000 capital; Ernest Lee Jahncke, Prest.; Paul Jahncke, V.-P.; Walter Jahncke, Secy.-Treas.; succeeds St. Tammany Ship Yards. (Ernest Lee Jahncke lately noted to construct shipbuilding plant.)

Md., Baltimore.—Baltimore Dry Docks & Ship Building Co., Holden A. Evans, Prest., foot of Cross St., let contracts for construction and machinery to equip additional shipyards; contract to Belmont Iron Works, Philadelphia, for steel buildings and accompanying work; contract to various companies for tools, air compressors, 4 locomotive cranes, etc.; soon award other machinery and tool contracts, also for other buildings; Day & Zimmerman, Engrs., Philadelphia; Otto G. Simonson, Archt., Maryland Casualty Tower, Baltimore, will prepare plans for office buildings and storehouses. (Lately noted planning additional facilities costing \$2,000,000, with immediate plans providing 4 or 5 shipbuilding berths for vessels up to 600 ft. long and 15,000 gross tonnage; future plans contemplating drydock facilities, to include floating drydock and construction of railroad tunnel to connect present plant with new yards.)

Miss., Moss Point.—L. N. Dantzier Lumber Co. will construct shipbuilding plant for 1250 to 1500-ton wooden vessels for its own use; site at Griffins Point, on east bank of East Pascagoula River, 6½ mi. north of river mouth and ½ mi. south of confluence of East Pascagoula and Escatawpa Rivers; land is elevated plateau 15 ft. above river level; has contracted for artesian well and partially for shipyard machinery. (Lately noted to build plant.)

Miss., Pascagoula.—Henry Plaggio, Gulfport, Miss., and Orange, Tex., will construct shipbuilding plant; purchased 20-acre site on east bank of East Pascagoula River, ½ mi. north of river mouth and 1 mi. south of Louisville & Nashville Ry.; other details not determined.

N. C., Wilmington.—W. H. Garland, Prest., International Navigation Co., Wilmington, Del., and New York, is reported planning to build ship yards; company wires (from Wilmington, N. C.) to Manufacturers Record: Estimated cost plant \$6,000,000; this includes steel rolling mills; construct steel, cement and wooden vessels; 3000-ton wooden vessels; 5000 to 10,000-ton steel vessels.

S. C., Charleston.—Valk & Murdoch Co. contemplates providing facilities for constructing large steel vessels at its plant on Cooper River; install 6000-ton sectional floating drydock; has sufficient frontage to build four 6000-ton ships at one time; conditional upon certain municipal action.

Tex., Houston.—Pan-American Trading Co., B. N. Garrett, Prest., will construct wooden shipbuilding plant on ship channel; has 5350 acres with 4½-mi. water frontage; utilize 100 acres for shipyards; now driving piles, installing sawmill, etc.; initial facilities to construct 2 ships at one time; increase to 6 vessels; build in accordance with United States Government specifications but for private ownership for service from Houston to Atlantic ports of North and South America.

Va., Newport News.—E. L. Bloxom plans to construct marine railway and boat repair station.

## TELEPHONE SYSTEMS

Ga., Sylvestria.—Bullock Telephone Co. will increase capital by \$5000 to buy rural lines.

Tex., San Antonio.—Southwestern Telegraph & Telephone Co., Dallas, Tex., opened bids June 12 to erect 51x66-ft., 2-story, reinforced concrete frame exchange building, with brick curtain walls and reinforced floors; fireproof; cost \$35,000; plans by Sanguiet & Staats, Fort Worth, Tex. (Lately noted.)

Tex., Tomball.—Tomball Telephone Co., capital \$5000, inceptd. by A. C. Christian, Wm. Holderrith, C. F. Hoffman and others.

## TEXTILE MILLS

Ala., Alexander City.—Cotton Products.—T. C. Russell will build cotton mill; ordered machinery.

Ga., Columbus.—Hosiery.—Mitchell Hosiery Co. organized; wires Manufacturers Record: Authorized capital \$200,000; John A. Mitchell, Prest.; A. H. Mitchell, Secy.-Treas.; starting on 200-needle women's hose; daily capacity 500 doz. prs.

Ga., Rocky Ford.—Knit Goods.—Thomas Parker, Cashier Bank of Rocky Ford, and others plan organization of company to establish knitting mill.

Md., Baltimore.—Automobile-tire Products. Tucker Mills, 428 E. Saratoga St., leased Zion Church property; after remodeling by owner will install machinery to manufacture automobile-tire products. (Lately noted to build addition for tire products.)

N. C., Coleridge.—Cotton Cloth.—Enterprise Manufacturing Co. will build addition and equip with looms for weaving cotton cloth.

N. C., East Kings Mountain.—Cotton Goods. Phenix Mills Co. chartered with \$200,000 capital by E. A. Smith of Hickory, N. C.; T. C. Guthrie and C. W. Tillet of Charlotte, N. C.

N. C., Statesville.—Hosiery.—Banner Knitting Mill chartered with \$30,000 capital by R. T. Weatherman, F. B. Bunch, E. B. Watts and others. (F. B. Bunch and others lately noted to establish hosiery-knitting mill.)

S. C., Gaffney.—Knit Underwear.—John H. Strigner, 76 Naira Pl., Newark, N. J., is not ready to state details of proposed plant. (Lately noted to establish underwear knitting mill.)

S. C., Gaffney.—Hosiery.—R. E. Grabbell, Secy., Chamber of Commerce and Agriculture, advises Manufacturers Record: Organized company with \$25,000 capital to establish hosiery mill; have building. (See Machinery Wanted—Knitting Machinery.)

Tex., Dallas.—Cotton Bags.—Fulton Bag and Cotton Mills will build additional factory; 5 stories and basement; concrete construction; 100x50 ft.; install machinery increasing capacity to manufacture cotton cloth and bags; let construction contract to Watson Co., Dallas; Lang & Witchell, Architects, Dallas, Tex.

Tex., Houston.—Waste Products.—Houston Waste Mills inceptd. with \$10,000 capital by H. A. Varner and F. M. Varner of Houston and L. E. Stenger of Dallas, Tex.; manufacture cotton and woolen waste used by railroads, machinery and supply companies, etc., in cleaning machinery and packing; leased buildings and will remodel preparatory to installing machinery; electric unit operation.

Tex., Houston.—Waste and Fibre.—Houston Waste & Fibre Mills, capital \$30,000, inceptd. by Mike H. Thomas, C. P. Thomas and F. D. Thomas, all of Dallas.

## WATER-WORKS

Ark., Little Rock.—Quartermaster's Dept. plans to construct 7 mi. of water and sewer mains; Capt. Kenneth P. Williams, Post Quartermaster.

Fla., Apalachicola.—City, J. P. Coombs, Commr. Public Works, contemplates laying about 4500 ft. 6-in. and 2000 ft. 8-in. cast-iron water pipe.

Ga., Atlanta.—City will construct additional water facilities to supply cantonment at Silver Lake; lay 16-in. water main from Hemphill Ave. pumping station to camp site, 10 mi., supplying 2,500,000 gals. daily; estimated cost \$250,000; increase pumping capacity of Hemphill station; also construct sewers; J. B. McCrary Co., Atlanta, will probably receive contract; W. Zode Smith, Supt. Water-works.

Ga., Atlanta.—City will construct additional water facilities to supply cantonment at Silver Lake; agrees to increase pumping capacity 10,000,000 gals. at Chattahoochee River, city and Hemphill pumping stations, respectively, and to construct water main for 10 mi. from 14th St. to Silver Lake; also extend sewer system; total estimated cost \$300,000; J. B. McCrary Co., Atlanta, will probably receive contract.)

Ky., Winchester.—City, S. B. Tracy, City Clerk, asks bids until July 6 to construct complete water-works system at estimated cost of \$180,000; to include 4 rapid-sand filters, each of 500,000 gals. daily capacity; sedimentation basin; intake; filter-house; power-house; 8 mi. 12-in. force main from Kentucky River; 70-ft.-high standpipe, capacity 275,000 or 500,000 gals. distribution system of 12 mi. 12, 10, 8 and 6-in. mains, valves, hydrants, etc.; Edgar B. Kay, Ch. Engr., Winchester. Lately noted. (See Machinery Wanted—Water-works.)

Md., Annapolis Junction.—Quartermaster-General's Dept., Washington, D. C., will drill wells for water supply in connection with establishment of training camp; Col. I. W. Littell, Washington, in general charge.

Miss., Clinton.—Town will drill deep well; invites bids until July 1 on well of following dimensions: 4-in. well with guaranteed capacity of 50,000 gals. every 24 hours; 6-in. well of same capacity; also 3-in. well; size not determined; R. R. Hardy, Clerk. (See Machinery Wanted—Well Drilling.)

Mo., De Soto.—City voted \$4000 bonds to construct water-works. Address The Mayor.

Okla., Rush Springs.—City, Louis Leverett, Prest. Board Trustees, asks bids until June 25 to construct water-works and sanitary sewers; Mackintosh-Walton Co., Engr., 1022 State National Bank Bldg., Oklahoma City; \$30,000 bonds lately noted voted for water-works. (See Machinery Wanted—Water-works and Sewer Construction.)

Okla., Tulsa.—City votes June 28 on \$1,042,500 bonds, of which \$660,000 will be expended for water-works extensions and improvements, including water belt line around business section of Tulsa proper, ample water facilities for West Tulsa and improvements in Kendall; belt line to be mainly 24-in. pipe; also includes additional water plugs, submains and extensions toward Kendall and river-crossing of West Tulsa main, which probably will be placed in conduit built in new county bridge; Stevens & Stiles, Consult. Engrs., Kansas City, Mo.; John H. Simmons, Mayor. (Lately noted.)

S. C., Bishopville.—City let contract Sullivan, Long & Haggerty, Bessemer, Ala., at \$43,073 to construct water-works and sewers; includes 204 lin. ft. 10-in., 2940 lin. ft. 6-in. and 4032 lin. ft. 4-in. cast-iron pipe; J. B. McCrary Co., Engr., Atlanta, Ga. (Lately noted inviting bids.)

S. C., St. Helena Island, P. O. Frogmore.—MacDonald, Wilkins & Co., Beaufort, S. C., will install fire pump, etc. and electric-light machinery. (See Electric Plants.)

Tex., Port Arthur.—City has completed plans for water-works and sewer system extension provided for in \$180,000 bond issue; soon invite bids. Address The Mayor.

### WOODWORKING PLANTS

Ala., Dothan.—Egg Cases.—Dothan Hardwood Co. will install machinery for manufacturing egg cases; has engine, boiler, planer, etc. (See Machinery Wanted—Woodworking Machinery.)

Ala., Mobile.—Shingles.—Gulf Shingle Co. inceptd. with \$10,000 capital; Wm. A. Kenopke, Pres.; C. W. Kenopke, V.-P. and Secy.

Ga., Athens.—Spokes and Handles.—Clay Hanna and others will erect spoke and handle factory.

Ga., Valdosta.—Heading.—Southern Heading & Mfg. Co., capital \$15,000, inceptd. by Chas. I. Harrell, A. S. Pendleton and others.

Ky., Louisville.—Veneer and Panels.—Inman Veneer & Panel Co., 29th St. and Broadway, increased capital from \$200,000 to \$250,000.

La., Bogalusa.—Boxes and Veneer.—Bogalusa Veneer & Box Co., capital \$150,000, inceptd. by C. W. Ames of Crawfordsville, Ind., and others; daily capacity, 20,000 ft.; purchased 6000 acres hardwood timber. (Lately noted.)

Miss. Ellisville.—Veneering.—Mutual Packing Co., J. Jakway, Pres., Benton Harbor, Mich., will establish veneering mill.

S. C., Greenville.—Spools and Skewers.—Greenville Spool & Mfg. Co. organized; V. D. Ramseur, Pres.; A. Ramseur, Secy.; open bids July 15 to erect ordinary construction, 35x70-ft., 2-story building, cost \$2000; install machinery, cost \$2000, to manufacture spools and skewers. (Lately noted inceptd., capital \$10,000.)

Tenn., Memphis.—Sashes and Doors.—Memphis Sash & Door Co. increased capital from \$40,000 to \$70,000.

### FIRE DAMAGE

Ala., East Perry, P. O. at Marion.—Ham & Rogers' sawmill.

Ala., Opelika.—Chattahoochee Valley Railway Co.'s depot; J. T. Barker, Gen. Mgr., West Point, Ga.; Austin Newman's store; loss \$20,000.

Fla., Live Oak.—Econpena Lumber Co.'s sawmill, planing mill, shingle mill and lumber; loss \$150,000.

Ky., Danville.—Misses Teresa and Evaline Eastland's residence.

Ky., Fordsville.—Wilson Co.'s store; Bank of Fordsville; Cumberland Telephone Exchange; Masonic temple; J. J. Tilford's store; Hotel Wise; T. J. Whittingham's residence and store; Roby Bros.' bakery; A. Despoero's store and residence; S. K. Allen's store; loss \$75,000 to \$100,000.

Ky., Louisville.—West Louisville Brewing Co.'s plant; loss \$75,000.

Mo., Lathrop.—Lathrop House; loss \$11,000.

N. C., Lexington.—Rothrock Chair Co.'s plant; loss \$10,000.

N. C., Salisbury.—Residences of John Brown and W. L. Rodgers.

Okla., Oilton.—Ogg Bldg. and other structures; loss \$20,000.

Okla., Collinsville.—Bartlesville Zinc Co.'s drykiln-room at zinc smelter; loss \$30,000.

Okla., Lawton.—Peerless Bakery and number business buildings.

S. C., Lancaster.—Lancaster & Chester Ry. Co.'s warehouse; loss \$25,000; A. P. McLure, Auditor, Gen. Mgr., Lancaster; Lancaster Oil Mill & Builders Supply Co.'s building.

Tenn., Louisville.—Methodist Episcopal Church. Address The Pastor.

Tenn., Nashville.—T. H. Hearn's residence.

Tenn., Nashville.—L. C. Lewis' residence at 43d and Nevada Ave.

Tenn., Newport.—Stokely Bros.' cannery; loss \$20,000.

Tex., Collegeport.—Jacob Klein's residence.

Tex., Glazier.—Glazier Mill & Elevator Co.'s plant, loss \$30,000; Whitehouse Lumber Co.'s mill, loss \$25,000; A. R. Chambers' store, loss \$10,000; Bom Amith building, occupied by Mercer Mercantile Co. and Southwestern Telephone Co.

Tex., Houston.—Haverty Furniture Co.'s warehouse.

Tex., Hutchins.—Dwellings of F. A. Lyon, Al Nichols, A. B. Chapman; Methodist Church and parsonage, Rev. Frank Richardson, Pastor.

Tex., Sweetwater.—S. R. Neblett's dwelling.

Tex., Yoakum.—Burnett Hotel, owned by H. H. Burnett, loss \$20,000; Yoakum Hotel and 2 residences, owned by W. A. Fink, loss \$12,000; C. G. Koerth's dwelling; loss \$3000.

Va., Bowling Green.—Antioch Christian Church; loss \$6500. Address The Pastor.

Va., Irvington.—Virginia Citizen's Publishing Co.'s office and plant; F. A. Gunby &

Son's store; First National Bank; offices of F. G. and Dr. W. J. Newbill.

Va., Portsmouth.—Virginia Bagging Co.'s 2 warehouses and Hawks-Maupin Co.'s store building, owned by Joseph A. Parker estate; loss \$25,000 to \$30,000.

W. Va., Huntington.—American Car & Foundry Co.'s blacksmith shop and machine shop No. 1; estimated loss, \$30,000.

J. J. Byrne, Building Inspector, City Hall. Address Board of Awards, care of Richard Gwinn, City Register, City Hall.

Miss., Hazlehurst.—City Hall.—City plans to erect city hall to replace burned structure. E. M. Cook, Mayor.

Mo., New Madrid.—Jail.—New Madrid County opens bids July 2 to erect courthouse and jail buildings. (See Courthouses.)

N. C., Hickory.—Library.—City has plans by Q. E. Herman, Hickory, for Carnegie library; 40x60 ft.; brick; stone trim; tile roof; hardwood floors; direct indirect steam heat; electric lights; cost \$11,000. (Lately noted.)

Tenn., Memphis.—Auditorium.—City votes July 28 on \$75,000 bonds to erect auditorium. Address The Mayor. (Previously noted.)

Tex., Stamford.—City Hall.—City voted \$25,000 bonds to erect city hall. Address The Mayor. (Lately noted.)

### COURTHOUSES

Ga., Alma.—Bacon County voted \$30,000 bonds to erect courthouse; T. B. Taylor, County Judge. (Previously noted.)

Mo., New Madrid.—New Madrid County receives bids until July 2 at office J. L. Ransburgh, County Clerk, for completion of courthouse and jail buildings according to plans and specifications on file at office of Mr. Ransburgh, New Madrid, and H. G. Clymer, Archt., 620 Wainwright Bldg., St. Louis. (Lately noted.)

N. C., Greensboro.—Guilford County Commissioners have plans by Harry Barton, Greensboro, and will probably let contract August 10 to erect courthouse. (Previously noted.)

Okla., Idabel.—McCurtain County is reported to vote on bonds to erect courthouse. Address County Commrs.

S. C., Saluda.—Saluda County Courthouse Commission receives bids until July 9 to erect courthouse; plans and specifications after June 23 at office M. T. Pitts, Chrmn. Courthouse Commission, Saluda, and C. Gadsden Sayre, Archt., Anderson, S. C.; about 50x134 ft.; semi-fireproof; white brick; stone columns; terra-cotta trimmings; slate or tile roof; reinforced concrete and tile floors; steam heat; electric lights; cost about \$50,000. (Lately noted.)

### DWELLINGS

Ala., Birmingham.—Mrs. M. R. Shanks has plans by W. A. Rayfield & Co., Birmingham, for 6 dwellings on Avenue C and 25th St.; 35x50 ft.; ordinary construction; Carey roof; pine floors; heaters; electric lights; cost \$5000; day labor. Address architects.

Ala., Gadsden.—J. B. Levert, New Orleans, will erect 2 bungalows. (See Apartment-Houses.)

Ala., Gadsden.—Mrs. Carl Lay is having plans prepared by A. D. Simpson, Gadsden, for \$3000 bungalow.

Ala., Oneonta.—Cambro-Clinton Mining Co. will erect additional dwellings for employes.

D. C., Washington.—Alex. Miller, 3640 New Hampshire Ave. N. W., will erect three 2-story dwellings, 3901 Illinois Ave. and 337 and 339 Randolph St.; cost \$13,000.

D. C., Washington.—Carl H. Smith, 1921 Biltmore St. N. W., will erect 8 brick dwellings, 3100-14 17th St.; cost \$33,600.

D. C., Washington.—Chas. W. King, Jr., 920 New York Ave., will erect several 6-room dwellings on Longfellow St., Brightwood Park.

D. C., Washington.—Walter S. Phelps has plans by Geo. T. Santmyers, 921½ New York Ave. N. W., Washington, for frame and cement dwelling, 13th and Franklin Sts.; cost \$3000.

D. C., Washington.—Wm. S. Phillips, 1409 New York Ave. N. W., has plans by E. Howser for 7 dwellings, 210-22 V St. N. E.; 6 rooms and tile bath; tapestry brick; colonial front porches and double rear sleeping porches; hardwood floors on first floor; electric lights; cost \$17,500.

Fla., Fort Pierce.—Evans & Brunen will erect bungalow; concrete blocks; 6 rooms and 2 baths.

Fla., Miami.—J. H. Davis will erect \$350 residence.

Fla., Miami.—Wm. Jermyn will erect \$900 residence.

Fla., Miami.—Frank Price-Williams will erect \$3500 dwelling.

Fla., St. Augustine.—C. J. Ziegler will erect cottage at Capo's North Beach.

Fla., St. Augustine.—Mason Evans, Youngstown, Ohio, is reported to erect dwelling.

## BUILDING NEWS

### BUILDINGS PROPOSED

#### APARTMENT-HOUSES

Ala., Gadsden.—J. B. Levert, New Orleans, has plans by A. D. Simpson, Gadsden, for 2 brick apartment-houses; 2 stories; 3-family type; steam heat; will also erect 2 bungalows.

Fla., Fort Myers.—Peter Tonneller will erect store and apartment building. (See Stores.)

Md., Baltimore.—M. Coverchek, 1204 E. Baltimore St., is having plans prepared by Geo. R. Callis, Jr., 55 Knickerbocker Bldg., Baltimore, for remodeling dwelling at 1609 Eutaw Pl. for apartment-house to contain 8 apartments. (Lately noted.)

Mo., Kansas City.—Mrs. Emma Eysell will erect 48-apartment flat and storerooms; cost \$67,000.

Mo., Kansas City.—L. E. Nicholson will erect 2-story, 4-apartment flat; cost \$4500.

Mo., St. Louis.—F. J. Cornwell Real Estate Co., 810 Chestnut St., will erect apartment and store building at 5696 Kingsbury St.; 125x150 ft.; fireproof; concrete roof; cost \$150,000; steam heat, \$15,000; push-button electric elevator; plans and construction by owner.

#### ASSOCIATION AND FRATERNAL

Ky., Mayfield.—B. P. O. E. has plans by Ellis X. Wickersham, Mayfield, for lodge building; 52x60 ft.; 2 stories and basement; brick and stone; composition roof; wood floors; cost \$16,000; bids opened May 20. (Previously noted.)

N. C., Oxford.—A. F. & A. M. have plans by Linthicum & Linthicum, 502-03 Loan & Trust Bldg., Durham, N. C., for superintendent's home at Masonic Orphanage; 2 stories; brick veneer; metal roof; 2 bathrooms; cost \$8000.

Okla., Muskogee.—Y. M. C. A. will erect 3-story fireproof building; cost \$50,000.

Tex., Clarendon.—Y. W. C. A., C. W. Taylor, Secy., rejected all bids to erect building and will advertise for new bids; brick construction. (Lately noted.)

#### BANK AND OFFICE

D. C., Washington.—Arlington Corp. is having plans prepared by Wyatt & Nolting, Keyser Bldg., Baltimore, Md., for office building on old Arlington Hotel site, Vermont Ave. between H and I Sts.

Md., Baltimore.—Baltimore Dry Docks & Ship Building Co., Holden A. Evans, Pres., foot of Cross St., is having plans prepared by Otto G. Simonson, Maryland Casualty Tower Bldg., Baltimore, for office buildings and storehouses in connection with additional shipyards.

Md., Brooklyn.—Davison Chemical Co., Garrett Bldg., Baltimore, Md., commissioned Jas. R. Edmunds, Jr., 908 Munsey Bldg., Baltimore, to prepare plans for office building at Curtis Bay.

N. C., Greensboro.—Jas. T. Morehead, Jr., will erect brick office building; cost \$3500.

Okla., Miami.—T. H. Martin, agent, acquired site at N. First and Main Sts. for Oklahoma City syndicate, it is reported, which plans to erect 8-story office building.

Tenn., Chattanooga.—Hamilton National Bank leased Wehl Block in rear of bank building, will extend present banking quarters, remodel leased structure or erect 2 or 3-story building to replace same.

Okla., Muskogee.—Muskogee National Bank, A. C. Trumbo, Pres., will remodel Mid-Continent Bldg. for bank; work under supervision of Charles Dawson, Muskogee.

Tex., Dallas.—Oak Cliff State Bank will erect 1-story brick bank building; cost \$8500.

#### CHURCHES

Ala., Bessemer.—Beulah Baptist Church, Rev. A. C. Henly, Pastor, has plans by W. A. Rayfield & Co., Birmingham, for building;

42x80 ft.; ordinary construction; metal shingle roof; pine floors; hot-air heat; electric lights; cost \$8000; bids opened June 15; construction begins July 1. Address architects.

D. C., Washington.—First Reformed Church, 13th and Monroe Sts. N. W., Rev. Jas. D. Buhrer, Pastor, will erect building; seating capacity 800; cost about \$48,000.

Ga., Savannah.—First Baptist Church rejected all bids to remodel building; will have plans revised by Henrik Wallin, Savannah, and call for new bids; light colored brick; limestone trim. (Previously noted.)

Md., Catonsville.—Presbyterian Church, Rev. J. E. Nesbit, Pastor, is having plans prepared by Wm. G. Beecher, 409 Calvert Bldg., Baltimore, for building; brick and stone; cost \$50,000.

Mo., St. Louis.—St. Mary's Episcopal Church, Rev. L. H. White, Rector, has plans by Nolte & Nauman, New Orleans, for church, parish-house and service building; rough stone with smooth stone trimmings; interior of main auditorium faced with light gray brick; ceiling paneled in oak; seating capacity 7000; sanctuary finished in marble and tile; rectory to contain 10 rooms; open-air auditorium between church and parish-house; all roofs carried on steel trusses covered with slate; cost about \$200,000.

N. C., Newton.—Methodist Episcopal Church, L. H. Phillips, Chrmn. Com., has plans by Q. E. Herman, Hickory, N. C., for parsonage; 8 rooms; hardwood floors; cedar shingle roof; stone foundation; electric lights.

Tenn., Louisville.—Methodist Episcopal Church is reported to erect building to replace structure damaged by fire. Address The Pastor.

Tex., Denton.—First Baptist Church, Rev. F. H. Watkins, pastor, has plans by R. H. Hunt, Chattanooga, Tenn., for building; 2 stories and basement; brick; main auditorium to seat 1500; balcony with seating capacity of 500; cost \$50,000. (Lately noted.)

Tex., Fort Worth.—United Methodist Church of Rosen Heights will erect building. Address The Pastor.

Tex., Orange.—Salem Methodist Church, Rev. C. S. Williams, Pastor, will erect building; 86x56 ft.; brick veneer; asbestos roof; wood floors; hot-air heat; construction begins about July 16. Address The Pastor. (Lately noted.)

Tex., Waco.—Central Presbyterian Church, Rev. E. E. Ingram, Pastor, will erect building to replace structure previously noted damaged by fire at loss \$15,000.

W. Va., Alderson.—Methodist Episcopal Church South, Rev. W. H. Ballinger, Pastor, will erect Sunday-school building; 50x57 ft.; brick; cement foundation; asbestos or slate roof; ordinary flooring; probably low-pressure steam heat; electric lights; cost about \$13,500; G. R. Ragan, Archt., Roanoke, Va.; R. S. Johnson, Pres. Building Com. (Lately noted.)

#### CITY AND COUNTY

Fla., Lake City.—City Hall and Fire Station.—Board of Bond Trustees will erect city hall and fire station; brick; metal or slate roof; cost \$8000. A. J. Moseley, Mayor.

Ga., Alma.—Jail.—Bacon County voted \$10,000 bonds to erect jail; T. B. Taylor, County Judge. (Previously noted.)

Md., Baltimore.—Morgue.—City will erect morgue on Aliceanna St. near President St.; 41x65 ft.; brick and reinforced concrete; slag roof; concrete floor; steam heat; electric lights; concrete sidewalks; cost \$27,000; bids opened June 27; plans by J. J. Byrne, Inspector of Buildings. Address Board of Awards, City Hall.

Md., Baltimore.—Practice Tower.—City, Jas. H. Preston, Mayor, will erect practice tower in rear fire engine-house on Baltimore St. near Fremont St.; 5 stories; 16 ft. square; brick and concrete; slag roof; joist and slab floor construction; cost \$4500; plans by



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Fla., West Palm Beach.—W. A. Weihe will erect bungalow. (See Contracts Awarded—Hotels.)

Ga., Atlanta.—J. H. Whisenant will erect 1-story frame dwelling; cost \$3000.

Ga., Atlanta.—J. A. Sames will erect several dwellings on Fort and Hilliard Sts.; cost \$8500.

Ga., Columbus.—Walter W. Curtis will erect number of bungalows; stucco on frame; composition roof; hardwood floors; furnace heat; tiled bathrooms; cost \$6000; T. W. and E. O. Smith, Archts., Murrah Bldg., Columbus.

Ga., West Point.—Arthur Hagendorn has plans by Walker & Chase, 1033 Candler Bldg., Atlanta, for residence; 2 stories and basement; frame; steam heat; electric lights; bids opened about middle of July.

Ky., Danville.—Misses Teresa and Evaline Eastland are reported to erect dwelling to replace burned structure.

Md., Baltimore.—James Keely, 1123 Poplar Grove St., purchased 34-acre tract known as Dorsey Hills, west side Gwynn's Falls Park, and will develop with 2-story dwellings.

Miss., Vicksburg.—Geo. L. Ryan has plans by M. J. Donovan, Vicksburg, for residence; 1 story and basement; 33x55.6 ft.; concrete and cement stucco on frame; asphalt shingle roof; hardwood floors; electric and gas lighting; cost \$5000; warm-air heat, \$300.

Mo., Kansas City.—A. J. King Realty Co. will erect 2-story stucco veneer dwelling; cost \$4000.

Mo., Kansas City.—E. C. Haller will erect three 2-story stucco veneer frame dwellings; cost \$17,000.

Mo., Kansas City.—A. W. Stickle will erect two 1-story frame dwellings; cost \$3000.

Mo., Kansas City.—Joseph De Maria will erect 2-story brick dwelling and garage; cost \$7200.

Mo., Kansas City.—Peter Palermo will erect dwelling and garage; 2 stories; brick; cost \$7200.

Mo., Kansas City.—J. C. Blackburn will erect 2-story brick-veneer dwelling; cost \$4000.

Mo., Kansas City.—Francisco Palermo will erect 2-story brick dwelling and garage; cost \$7200.

Mo., Kansas City.—R. Custenborden will erect dwelling; 2 stories; stone veneer; cost \$3000.

Okl., Oklahoma City.—Nichols & Chandler will erect 2 dwellings; 1 and 2 stories; frame; cost \$7000.

Okl., Oklahoma City.—J. W. Johnson will erect addition to building at 211 W. Fourth St. for rooming-house; 38½x50 ft.; brick; gravel and tar roof; wood floors; gas heat; electric lights; cost \$6000; construction under supervision F. M. Ray, 320 W. Ninth St., Oklahoma City. (Lately noted under Stores.)

Okl., Tulsa.—Mrs. Mary Abdo will erect brick residence; cost \$8000.

Okl., Tulsa.—J. O. Campbell will erect \$10,000 brick residence.

Okl., Tulsa.—A. E. Garza will erect two 1-story frame dwellings; cost \$6000.

Okl., Tulsa.—L. O. Brown will erect 2-story frame residence; cost \$3400.

Okl., Tulsa.—L. S. Worthington will erect 1-story frame residence; cost \$3000.

Okl., Tulsa.—R. E. Downing has plans by John V. Starr, 295 Seaman Bldg., Tulsa, for residence; main body, exclusive of verandas, porte-cochere, etc., 48x40 ft.; 2 stories, basement and attic; brick with hollow tile backing; asphalt slate roof; wood joists; cost \$20,000; hot-water heat, about \$2000; electric fixtures, remote control, \$550; cement sidewalks, \$300; all materials supplied locally. Address architect. (Previously noted.)

Tex., Gonzales.—J. M. Murphy will erect residence.

Va., Richmond.—C. G. Morris will erect brick dwelling; cost \$8500.

Va., Richmond.—W. F. Drinkard, Jr., will erect brick dwelling, 1501 Second Ave.; cost \$3000.

## GOVERNMENT AND STATE

Ala., Jasper.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., rejected bids to erect postoffice; will soon call for supplementary bids from original bidders. (Lately noted.)

Ark., Little Rock.—Cantonment.—Quartermaster General's Dept., Washington, D. C., will develop military camp, erect cantonment for 65,000 soldiers; will involve construction of about 40 mi. of roads, 4 mi. railroad, 7 mi. sewerage, etc.; estimated cost

\$3,500,000; Col. I. W. Littell in general charge.

Md., Annapolis Junction.—Training Camp. Quartermaster-General's Dept., Washington, D. C., will establish training camp in Anne Arundel county; plans include erection of buildings, construction of roads, sanitary system, digging wells, installing ice plants, etc.; specifications include following materials: 1325 carloads of lumber; 820 carloads of crushed stone for roads; 28,000 squares of roofing, or 60 carloads; 20 carloads of nails and hardware; 20 carloads of plumbing; 192 carloads of tanks, heaters, stoves, ranges, piping, electrical material, refrigerators, etc.; 10 carloads of electric-light poles, wires, insulators, etc.; material for 12,000 cu. yds. of concrete, including 70 carloads of cement, 350 carloads of stone and 175 carloads of sand; barracks arranged so that men may sleep in double-deck bunks; there will be 37,000 such bunks, with individual mattresses; 130 carloads of piping and drains for water and sewage; 150 carloads of hospital equipment; 3 carloads of fly screens; 20 carloads of construction tools; Col. I. W. Littell in general charge, Washington, D. C.

N. C., Chapel Hill.—Postoffice.—Treasury Department, Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opened bids to erect postoffice; W. F. Brent, Norfolk, Va., at \$48,333, is only bidder. (Lately noted.)

Okl., Chilocco.—Cottage.—Department of Interior, Office of Indian Affairs, Washington, D. C., rejected all bids to erect stone employees' cottages at Chilocco Indian School.

Okl., Fort Sill.—See Tex., Fort Worth.

Tenn., Gallatin.—Postoffice.—Treasury Department, Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opens bids July 26 to erect postoffice; drawings and specifications from custodian of site, Gallatin, and Mr. Wetmore, Washington.

Tex., Denton.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opened bids to construct postoffice; W. D. Lovell, Minneapolis, Minn., only bidder at \$71,400; 1 story and basement; limestone; steam heat; electric fixtures. (Lately noted.)

Tex., Fort Worth.—Cantonments.—Quartermaster General's Dept. selected sites at Fort Worth, Waco and Houston, Tex.; Fort Sill, Okla., for cantonments.

Tex., Houston.—See Tex., Fort Worth.

Tex., Marshall.—Postoffice.—Custodian U. S. postoffice, Marshall, opened bids for repairs to approaches to postoffice; Emil Grohne, Joliet, Ill., low bidder at \$4279.

Tex., Orange.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opened bids to erect postoffice; Algernon Blair, Montgomery, Ala., low bidder at \$54,472. (Lately noted.)

Tex., San Antonio.—Storehouse.—Government will erect 2 additional stories to storehouse G at United States Arsenal now under construction; fireproof; white stucco; art stone trim; total cost \$110,000; bids received June 13 by Major Harry B. Jordan, Commandant at Arsenal; Henry T. Phelps, Archt., Gunther Bldg., San Antonio. (Previously noted.)

Tex., Vernon.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opens bids July 27 to erect postoffice; drawings and specifications from custodian of site, Vernon, and Mr. Wetmore, Washington.

Tex., Waco.—See Tex., Fort Worth.

Va., Cape Henry.—Weather Bureau.—Secretary of Agriculture, Washington, D. C., opened bids to construct 3-story and cellar, cement and brick building for Weather Bureau, U. S. Dept. of Agriculture; Baker & Brinkley, Norfolk, Va., low bidders at \$27,000. (Lately noted.)

## HOSPITALS, SANITARIUMS, ETC.

N. C., Roanoke Rapids.—Roanoke Rapids Hospital, Incptd., will erect 2-story-and-basement building; brick; terra-cotta tile roof; 35 beds; basement for laundry, vacuum heating plant, etc.; cost \$40,000, including equipment; bids opened June 27 at office Herbert W. Simpson, Archt., Paul-Gale-Greenwood Bldg., Norfolk, Va.

S. C., Aiken.—J. B. Salley, Aiken, and Mrs. C. Oliver Iselin, Glen Head, L. I., N. Y., are interested in enlargement of Aiken Hospital.

Tex., Orange.—H. J. L. Stark, Orange, receives bids until July 3 to erect hospital for Mrs. Frances Lutchter; plans and specifications at office C. H. Page & Bro., Archts., Austin.

## HOTELS

Ark., Little Rock.—Hotel Marion Co., Herman Kahn, Prest., is having plans prepared by Mann & Stern, Gazette Bldg., Little Rock, for annex to Hotel Marion; reinforced concrete; tar and gravel roof; flat slab and girder floor construction; vacuum heat from boilers in main building; electric lights; passenger and freight elevators; bids opened about June 25. Architects, who may be addressed, wire Manufacturers Record: "Annex 8 stories and basement; 45x125 ft.; 130 rooms; 120 baths; plans ready about June 18; cost \$150,000 complete."

Ark., Newport.—Wolff-Goldmann Realty Co. has plans by Mann & Stern, Little Rock, to erect hotel to replace Hazel Hotel; 3 stories; 75x142 ft.; brick; Johns-Manville roofing; wood and tile roof; steam heat; city lighting; cost \$65,000. (Lately noted.)

Fla., Miami.—James H. Johnson has plans by E. A. Nolan, Miami, for apartment hotel on Tenth St., near Avenue B; 36 suites and 22 additional rooms; frontage 44 ft.; concrete skeleton; hollow tile curtain walls; 4-ply built-up roof; electric lights; 12-ft. concrete pillard porch across front; lobby 22x44 ft., with Spanish tile floor and marble stairway leading up from it; 3 or 4 stories at present with provision for additional stories; elevator shaft adjoining lobby, but elevator not installed until other stories are added; cost \$50,000 to \$60,000. (Lately noted under Apartment-houses.)

Okl., Quapaw.—W. F. Baker will erect hotel to cost about \$40,000.

Tex., Yoakum.—H. H. Burnett will rebuild hotel noted damaged by fire at loss \$20,000.

Va., Suffolk.—Nansemond Hotel postponed erection of hotel; 4 stories; fireproof; steam heat; electric lights; cost \$150,000; Rossell Edward Mitchell, Archt., Norfolk, Va. (Previously noted.)

## MISCELLANEOUS

Tex., Waco.—Coliseum.—Texas Cotton Palace Assn., S. N. Mayfield, Secy., receives bids until June 30 to erect coliseum; 200x196 ft.; reinforced concrete with brick and tile; 1 story; 103 boxes; dance hall 106x78 ft.; 14 exits; cost \$50,000. (Lately noted.)

## RAILWAY STATIONS, SHEDS, ETC.

Ga., Cordele.—Georgia Southern & Florida Ry., J. A. Griffin, Engr. M. W. & S., Macon, will remodel union passenger station.

Tenn., Memphis.—Illinois Central R. R., A. S. Baldwin, Chief Engr., Chicago, is having preliminary plans prepared for 1-story brick building to be used for office, storeroom, carpenter shop and pipe shop; 15x24x200 ft.; will also construct soaking vat.

Tex., Dallas.—Texas Electric Ry., Burr Martin, V.-P. and Gen. Mgr., will erect \$50,000 to \$100,000 union interurban express terminal for Electric Express Co., Harry L. Seay, Prest.

Tex., Dallas.—Dallas Interurban Terminal Assn., Chas. F. Wallace, Prest., will erect \$3500 addition.

## SCHOOLS

Ala., Mobile.—Mobile County Board of Education receives bids through Geo. B. Rogers, Archt., Suite 1010, Van Antwerp Bldg., Mobile, until July 2 for erection of rural school buildings; plans and specifications at office of architect. (Lately noted.)

Ark., Hope.—School Board will erect high school and graded school buildings.

Ark., Spadra.—Spadra School Dist. will erect 2-story brick building; cost \$10,000. Address Dist. School Trustees.

Ark., Tuckerman.—Tuckerman Special School Dist. has plans by James H. Bliss, Little Rock, for school; about 50x125 ft.; brick; composition roof; wood floors; steam heat; Delco lighting system; cost \$25,000; date opening bids not set. (Lately noted.)

Fla., Jacksonville.—Duvall County Board of Public Instruction, F. A. Hathaway, Supt., rejected all bids to erect School No. 6; 192x220 ft.; 16 rooms; brick; semi fireproof; steel roof trusses over auditorium; composition roof; slab and beam and concrete floor construction cost \$80,000; R. A. Benjamin, Archt., Jacksonville. (Lately noted.)

Fla., Homestead.—Dade County Board of Public Instruction, R. E. Hall, Supt., Miami, receives bids until July 2 to erect addition to school building; plans and specifications at office August Geiger, Miami. (Lately noted.)

Fla., Kenansville.—See Fla., Kissimmee.

Fla., Kissimmee.—Osceola County Board

of Public Instruction will have plans prepared for 4-room brick school at Kenansville and frame schools at Campbell Station and Lokossee.

Fla., Lokossee.—See Fla., Kissimmee.

Fla., Miami.—Dade County Agricultural High School Trustees will establish agricultural high school system, with Lemon City School as nucleus; will erect number of dormitories and other school buildings later; R. E. Hall, Supt. of Public Institution.

Fla., Wimauma.—Hillsborough County Board of Public Instruction, J. E. Knight, Supt., Tampa, receives bids until July 3 to erect 1-story frame school building 6 mi. from Wimauma; plans and specifications at office Mr. Knight.

Ga., Doerun.—Town voted \$7500 school bonds; H. W. Garrett, Town Clerk and Treas. (Previously noted.)

Ga., Savannah.—Board of Education of Chatham County receives bids until June 22 to erect 4-room school at Rose Dhu and 2-room addition to school at Thunderbolt, Ga.; plans and specifications at office Edward Warren Young, Archt., American Bank Bldg., Savannah. (Previously noted.)

Ga., Thunderbolt.—See Ga., Savannah.

Ky., Paris.—City voted \$46,000 school bonds. Address The Mayor. (Lately noted.)

Ky., Pleasureville.—H. C. Riner is having plans prepared by Thos. J. Nolan, 310 Courier-Journal Bldg., Louisville, for school; 60x50 ft.; brick; composition roof; wood floors; furnace heat; cost \$10,000.

Ky., Sedalia.—Sedalia Special School Dist. will erect building; 66.6x71 ft.; brick; tin roof; wood floors; steam heat; cost \$12,000; bids opened June 19; Ellis X. Wickersham, Archt., Mayfield, Ky. (Lately noted.)

La., Alexandria.—Rapides Parish School Board receives bids until June 22 for material and erection of 1-room frame school at Hard Times and 2-room frame buildings at Dixie, Flatwoods and Lena; plans and specifications at office D. B. Showalter, Parish Supt., and Herman J. Duncan, Archt., 6 Medical Bldg., Alexandria. (Previously noted.)

La., Flatwoods.—See La., Alexandria.

La., Newellton.—School Board will erect addition to high school; Thos. H. Wade, Supt., St. Joseph, La.; bids received June 7.

Md., Baltimore.—Park School, 3440 Auchen-  
torely Terrace, will erect school on Liberty Heights Ave.; stucco; 1 story except administration building; 30x225 ft.; one glass side for each classroom; gymnasium, domestic science equipment, etc.; 3 athletic fields; tennis courts; open air gymnasium; cost including site about \$100,000; bids opened June 19; Smith & May, Archts., 1133 Calvert Bldg., Baltimore; contractors estimating are: G. Walter Tovell, Eutaw and McCulloch Sts.; Cowan Building Co., 106 W. Madison St.; Willard E. Harn Co., 213 N. Calvert St.; Gladfelter & Chambers, 729 Roland Ave.; Edward Brady & Sons, 1113 Cathedral St.; Consolidated Engineering Co., Calvert Bldg.; Walter E. Burnham, 808-9 Law Bldg., all of Baltimore. (Previously noted.)

Miss., Hazlehurst.—City postponed erection of annex to high school; E. M. Cook, Mayor. (Lately noted.)

Miss., Meridian.—Oakland Heights Separate School Dist. votes June 26 on \$6000 bonds to acquire site, erect and equip school; O. J. Wilder, N. M. Collins and S. M. Bailey, Election Commrs. of Lauderdale County.

Miss., Rome.—Rome Separate School Dist. will issue \$12,000 bonds to erect and equip school; Dr. W. M. Biggs, Mayor.

Miss., Tchula.—Trustees rejected all bids to erect school; will revise plans and call for new bids; N. W. Overstreet, Archt., Jackson, Miss. (Lately noted.)

Mo., Jefferson City.—City voted \$47,000 bonds to erect central ward school and enlarge Broadway School. Address The Mayor.

Mo., Joplin.—J. R. Nichols, 1416 Main St., Secy. Oakland School Dist. No. 98, Jasper County, receives bids until June 26 to erect school at Royal Heights; bids to include construction of heating system to be installed at Oakland Schoolhouse; plans and specifications at office C. W. Stines, Archt., Webb City, Mo., and Mr. Nichols as above.

Mo., Oakland.—Oakland School District No. 98, J. R. Nichols, Secy., 1416 Main St., Joplin, Mo., receives bids until June 26 to erect school building at Royal Heights; also bids for installation of heating system at Oakland School; plans and specifications at office C. W. Stines, Archt., Webb City, Mo., and Mr. Nichols as above.

N. C., Bahama.—C. W. Massey, County Supt., receives bids until June 30 to erect

dormitory at Bahama High School; plans and specifications at office Mr. Massey.

N. C., Charlotte.—Jno. B. Ross, Chrmn. Building Com., receives competitive designs from architects July 1 in Council Chamber, City Hall, for high school and grammar school buildings; printed instructions furnished architects on application. (Previously noted.)

N. C., Rich Square.—Rich Square School Dist. voted \$25,000 bonds to erect public school building; A. J. Conner, Chrmn. Board of Trustees.

Okla., Coalgate.—Board of Education, C. M. Stevens, Secy., will erect high school building; bids opened June 18; Ye Planry, Inc., Archts., Dallas, Tex. (Previously noted.)

Okla., Fort Gibson.—Directors School District No. 3, Frank E. Leonard, Clerk, receive bids until July 5 to raise school building and for furnishing labor and material in addition to material obtained from wrecking to erect new building; separate bids for general work, heating and plumbing and electric fixtures; plans and specifications at office H. O. Valeur & Co., Archts. and Consult. Engrs., 705 Phoenix Bldg., Muskogee, Okla., and Mr. Leonard, Fort Gibson.

Tenn., Ashland City.—City plans to issue \$10,000 high school bonds. Address The Mayor.

Tenn., Chattanooga.—Board of Education selected R. H. Hunt, James Bldg., Chattanooga, to prepare plans for Wyatt High School; cost \$100,000.

Tenn., Knoxville.—City Commission receives bids until June 25 to erect addition to Van Gilder School, according to plans and specifications by R. F. Graf & Son, Knoxville; John E. McMillan. (Lately noted.)

Tenn., Memphis.—Board of Education, A. A. Kincannon, Supt., opened bids to erect Rozell School; J. E. Hollingsworth & Co., Memphis, low bidders at \$122,887; plans include 3 stories; red brick; terra-cotta trim; fireproof; auditorium, 2 stories, with seating capacity of 450; 14 classrooms; public library; domestic science department; gravity ventilating system; fire towers, etc. (Previously noted.)

Tex., College Station.—Agricultural & Mechanical College will erect dormitory; about 102x118 ft.; fireproof; concrete floors and roof; steam heat; electric lights; date opening bids postponed from June 12 for possibly 10 days; plans by department of architecture of college. (Lately noted.)

Tex., Denton.—College of Industrial Arts, F. M. Bralley, Prest., adopted plans for \$140,000 dormitory; also having plans prepared for demonstration cottage, laundry building, dairy and stock barn and enlargement of power plant; Geo. E. Kessler, Landscape Archt., St. Louis.

Tex., Fort Worth.—Common School District No. 99 defeated \$7000 bond issue to erect school. (Previously noted.)

Tex., Gatesville.—State Juvenile Training School Trustees receive competitive plans until July 6 for fireproof school and for fireproofing and remodeling present building; Chas. E. King, Supt.

Tex., Hamilton.—Hamilton School Board has plans by Roy E. Lane, Waco, Tex., for school; 2 stories; 85x49.6 ft.; stone wall; ordinary construction; tar and gravel roof; wood floors; jacketed heaters (purchased); electric lights; cost \$10,000; bids opened June 30. Address architect. (Lately noted.)

Tex., May.—May Independent School Trustees, B. H. Bettis, Prest., will erect 2-story brick school; bids opened June 20.

Va., Altavista.—Otto River District School Board receives bids through Heard, Cardwell & Craighill, Archts., 1107 People's National Bank Bldg., Lynchburg, Va., until June 27 to erect high school; brick; 10 rooms; 49x90 ft.; composition roof; wood floors; cost \$15,000; steam heat, about \$1200; plans and specifications at office of architects. (Lately noted.)

W. Va., Clarksburg.—Board of Education, Clarksburg School Dist., James N. Hess, Secy., receives bids until July 3 to erect addition to Washington Irving High School, according to plans by Wm. B. Ittner, St. Louis; bids received for general work; also heating and ventilating; plans and specifications at office Board of Education.

Va., Mt. Jackson.—Ashley Dist. School Board has plans by G. R. Ragan, Roanoke, Va., for school; 95x55 ft.; with auditorium attached to rear, 42x51 ft.; brick; asphalt roof; concrete basement floors; other floors, maple; electric wiring; day labor; will soon call for bids on roof, heating and lumber. Address W. H. Tisinger, Clk., Mt. Jackson. (Lately noted.)

## STORES

Ala., Ashland.—Grundy Horn will erect store building; brick.

Ala., Ashland.—J. A. White will erect brick store building.

Ark., Little Rock.—Allison & Bevins will erect 2-story brick building; cost \$6000.

D. C., Washington.—Harry Wardman, 1430 K St. N. W., will erect 4-story store building on 14th St.; 23x85 ft.; stone and brick; elevator; electric lights; steam heat; cost \$50,000.

D. C., Washington.—C. L. Harding, Archt., 1125-6 Woodward Bldg., Washington, is taking bids for 10-story business building, 918 G St. N. W.; 68x133 ft.; Gothic style; cream-glazed terra-cotta; floor in main corridor and stairs of marble; birch-stained mahogany woodwork; steam heat; three elevators.

Fla., Fort Myers.—Peter Tonneller will erect store and apartment building; 2 stories; 58x60 ft.; cement concrete blocks; cost \$5000; lower floor, 2 stories; upper floor, apartments.

Fla., Jacksonville.—G. E. Smith will erect 2-story concrete building; cost \$20,000.

Fla., Jacksonville.—G. E. Smith will erect 2-story concrete building; cost \$20,000.

Fla., Tampa.—W. L. Brown will erect business building; 3 stories; 65x105 ft.; reinforced concrete; construction to permit 7 additional stories; F. M. Curtis, Archt., Tampa.

Ky., Fordsville.—J. F. Cooper will erect building; probably brick or concrete; metal roof.

Ky., Louisville.—Susie D. Harding will remodel brick building at 314 W. Market St.; cost \$5000.

Ky., Pineville.—Hodges Bros. will erect 1-story brick store building; 125 ft. long.

Mo., Kansas City.—W. W. Goodwin will erect 2-story brick store; cost \$12,000.

Mo., Kansas City.—Mrs. Emma Byssell will erect store and apartment building. (See Apartment-houses.)

Mo., St. Louis.—F. J. Cornwell Real Estate Co. will erect store and apartment-house. (See Apartment-houses.)

S. C., Greenville.—Stone Bros. will erect brick business building.

Tex., Dallas.—Liberty Investment Co. will erect 1-story brick store; cost \$5000.

## THEATERS

Ga., Moultrie.—A. Huber will remodel Kathleen Theater, provide marble steps, enlarge seating capacity, rebuild stage, provide new scenery, etc.

## WAREHOUSES

Ark., Fort Smith.—Fort Smith Compress Co., E. F. Creekmore, V.-P. and Gen. Mgr., will erect warehouse; 375x150 ft.; 5 compartments 75x150 ft.; reinforced concrete throughout; sprinklers; blue prints and specifications ready July 18; cost of building, tank and sprinklers, \$65,000; A. Klingensmith, Archt. and Engr., Fort Smith.

Fla., Fort Pierce.—Gulf Refining Co., Jacksonville, will erect dock 1100 ft. long and warehouse 50x80 ft., with hippodrome roof; total cost \$7000.

Md., Baltimore.—Baltimore Dry Docks & Ship Building Co., Holden A. Evans, Prest., foot of Cross St., is having plans prepared by Otto G. Simonson, Maryland Casualty Tower Bldg., Baltimore, for storehouses and office buildings in connection with additional shipyards.

Tex., San Antonio.—Harry Landa will erect warehouse; cost \$11,000.

Mo., Kansas City.—Mutual Oil Co., O. H. Williams, Prest., will erect \$25,000 warehouse.

Va., Richmond.—W. P. Wood will expend \$10,000 to repair seed warehouse.

## BUILDING CONTRACTS AWARDED

### APARTMENT-HOUSES

D. C., Washington.—I. Greenberg has plans by Geo. T. Santmyers, 921½ New York Ave. N. W., Washington, for apartment-house, 1402-04 1st St. N. W.; eight 3 and 4-room apartments and eight baths; tapestry brick; gas and electric fixtures; pine floors; cost \$10,000; M. Gummernick, Contr.

La., New Orleans.—Jules S. Dreyfous and Harold S. Mayer acquired Blair mansion and let contract to Alfred Garrett, New Orleans, to remodel and erect addition for apartment-house; 8 apartments of 2 and 3 rooms; tile baths; Brune & Bing, Archts., New Orleans.

Md., Baltimore.—Harold Hann let contract to J. H. Smith, 1426 Light St., Baltimore, to erect apartment-house on north side Queen Anne St., Walbrook; 2 stories; 31.6x46.6 ft.; cost \$10,700; Theodore Wells Pietsch, Archt., 1210 American Bldg., Baltimore.

Va., Portsmouth.—Mrs. Lena S. Whilden let contract to S. B. Hutchins, Portsmouth, to erect 3-story apartment-house; 6 apartments; cost \$9000.

### ASSOCIATION AND FRATERNAL

La., Lafayette.—Hope Lodge No. 145, A. F. & A. M., let contract to J. A. VanDyke, Lafayette, to erect Masonic Temple; 68.6x42 ft.; 2 stories; pressed brick; composition roof; wood floors; cost \$12,750; G. B. Knapp, Archt., Lafayette. Address Contr. (Lately noted.)

Tex., Matador.—Matador Lodge No. 495, I. O. O. F., let contract to erect business and lodge building; 2 stories; 25x100 ft.; brick; gravel roof; concrete floors; cost \$7000, exclusive of lighting; Cannedy & Ueltschey, Archt., Matador; construction begins July 1.

### BANK AND OFFICE

D. C., Washington.—Fieldhouse.—Office of Public Buildings & Grounds, Col. W. W. Harts in charge, let contract to A. C. Moses Construction Co., 916 New York Ave. N. W., Washington, to erect locker and show wings of fieldhouse in East Potomac Park; 33x133 ft. each; concrete basement; hollow-tile walls and partitions; stucco and cast cement trim; slag roof; corridor floors, quarry tile; other floors white maple; steam heat; city electric lights; cost \$55,000; Horace W. Peaslee, Archt., 1729 New York Ave., Washington. (Previously noted.)

D. C., Washington.—Commercial National Bank let contract to F. L. Wagner, 1413 H St. N. W., Washington, to erect 9-story bank

and office building, 14th and G Sts.; plans by Waddy B. Wood, 816 Connecticut Ave. N. W., Washington call for structure 75x100 ft.; fireproof; Indiana limestone with polished granite base; vault and 25,000 safety boxes in basement; elevators; vapor vacuum system of heat; banking-room on first floor, 40 ft. high, finished in Botticini marble with metal ceiling; Western Union Telegraph Co.'s office also on first floor, finished in marble; mezzanine reached by private elevator; upper floors for offices; cost \$424,900. (Previously noted.)

N. C., Mebane.—Mebane Bank & Trust Co. let contract to W. C. Gibson, First National Bank Bldg., Durham, N. C., to erect bank building; 20x69.6 ft.; ordinary construction; Barrett slag roof; steam heat; electric lights; Linthicum & Linthicum, Archts., 502-03 Loan & Trust Bldg., Durham. (Previously noted.)

Okla., Tulsa.—Oklahoma Tool & Supply Co. let contract to erect warehouse and office building. (See Warehouses.)

Tex., Waco.—Fire Station.—City let contracts to Smith & Petzold, Waco, to erect fire stations in East Waco and on S. 5th St.; 30x60 ft.; hollow tile and plaster; metal tile roof; concrete and wood floors; cost \$8500; plans by S. P. Herbert, Building Inspector. All materials purchased. (Lately noted.)

## CHURCHES

Fla., Miami.—Trinity Episcopal Church let contract to Will A. Otter, Miami, to erect guild hall; 25x100 ft.; concrete; tile roof; pine floors; lighting to cost about \$350; Geo. L. Pfeiffer, Archt., Lemon City, Fla. (Lately noted.)

Ga., Dublin.—Methodist Church let contract to T. C. Fountain to erect parsonage; 2 stories. Address The Pastor.

## CITY AND COUNTY

Okla., Lehigh.—City Hall and Jail.—City let contract to Ross & Elliott, Lehigh, to erect city hall and jail; 25x60 ft.; 2 stories; brick; tar roof; cement and wood floors; cost \$4850; W. H. Sparger, Archt., Lehigh. (Lately noted.)

Tenn., Nashville.—Pavilion.—Board of Park Commissioners let contract to Primm Lumber Co., Nashville, to erect open pavilion with comfort station; 62x25 ft.; 2 stories; cut stone; Barrett roof; reinforced concrete floors; electric stoves; cost \$11,000; Donald W. Southgate, Archt., Nashville. (Lately noted.)

Tex., Cuero.—Jail.—Dewitt County let contract to Jansen Bros. Co., Cuero, to erect jail; 43x56 ft.; 3 stories and basement; reinforced concrete; Barrett roof; concrete floors; steam heat; electric lights; electric dumb waiter; also let contract to San Antonio (Tex.) Structural Steel Co., for cages and other steel work; cost \$30,000; construction begun; H. A. Reuter, Archt., San Antonio. (Previously noted.)

W. Va., Charles Town.—Jail.—Jefferson County Commrs. let contract to Roanoke Iron & Bridge Works, Inc., Roanoke, Va., to erect jail and jailer's residence; 79x59.6 ft.; brick, stone, wood and concrete; tin roof; reinforced concrete and wood joist floor construction; vacuum vapor heat; lighting fixtures and range for kitchen not included in general contract; A. B. Mullett & Co., Archts., 721 Union Trust Bldg., Washington, D. C. (Lately noted.)

## DWELLINGS

Ala., Gadsden.—B. W. Pruet let contract to W. S. Moyers, Gadsden, to erect residence; 10 rooms; brick veneer; slate roof; parquet floors first story; tile porch and bath; steam heat; cost \$16,000; A. D. Simpson, Archt., Gadsden. (Lately noted.)

Ark., Earle.—A. Outzen let contract to Eavenson & Collins, Earle, to erect residence; about 8 rooms; bungalow style; frame; shingle roof; hot-water heat; cost \$5500; construction begun. (Lately noted.)

D. C., Washington.—Male H. Williams let contract to A. L. Smith Co., 1111 Woodward Bldg., Washington, to erect 3-story dwelling, 2929 Massachusetts Ave. N. W.; cost \$35,000; Clarke Wagman, Archt., 1121A Connecticut Ave. N. W., Washington.

Fla., Clearwater.—James P. Cass, Tyrone, Pa., let contract to John Phillipoff, Clearwater, to remodel dwelling.

Fla., Daytona.—Mrs. F. M. Newall is having plans prepared by and let contract to S. H. Gove, Daytona, to erect beach cottage. (Lately noted.)

Fla., Daytona Beach.—Mrs. F. A. Newell has plans by and let contract to S. H. Gove, Daytona, Fla., to erect residence, 22x50 ft.; wing 16x33 ft.; wood; slate roof covered with shingles; wood floor; hot-air furnace; city lighting; cost \$4500. (Lately noted.)

Fla., Seabreeze.—Geo. H. Barlow let contract to S. H. Gove, Daytona, to erect 2 additions (10x26 and 13x24 ft.) and remodel residence; wood; wood shingle roof; wood floors; gas heat; city lighting; cost \$3000. (Lately noted.)

Fla., St. Augustine.—J. A. Lew let contract to erect cottage on Almera St.

Fla., St. Petersburg.—Paul R. Scherer let contract to H. F. Lancaster, St. Petersburg, to erect \$3000 concrete dwelling.

Fla., St. Petersburg.—John A. Morris let contract to Geo. N. Sarven, St. Petersburg, to erect dwelling; 6 rooms; cost \$4400; Henry H. Dupont & Co., Archts., St. Petersburg.

Fla., St. Petersburg.—A. W. Fisher let contract to J. Frank Chase, St. Petersburg, to erect dwelling; 9 rooms; frame; composition roof; cost \$4000. (Lately noted.)

Ga., Augusta.—R. A. Sibley, Rochester, N. Y., let contract to C. B. Holley, Augusta, to remodel and enlarge residence; slate roof; joist floor construction; repair heating system; cost \$8500; lighting, about \$200; Wendell & Robinson, Archts., Augusta. Address Contr. (Lately noted.)

Ga., Vidalia.—J. R. Smith, Stillmore, Ga., has plans by and let contract to J. T. Ragan, Vidalia, to erect 7-room bungalow; wood; shingle roof; wood floors cost \$3500.

La., Crowley.—G. B. Thomson let contract to Louis Dupuis to erect bungalow to replace structure previously noted damaged by fire.

N. C., Durham.—Mrs. Minnie L. Yearby let contract to Harris & Poe, Durham, to erect residence; about 40x80 ft.; frame; shingle roof; hardwood and rift pine floors; cost \$7250; heating and plumbing, \$2250; H. P. S. Keller, Archt., Raleigh, N. C. (Lately noted.)

N. C., Winston-Salem.—C. D. Cromer let contract to Fogle Bros. Co., Winston-Salem, to erect residence on Boulevard; frame; shingle roof. (Lately noted.)

N. C., Winston-Salem.—C. T. Joyce, 122 Spring St., let contract to J. E. Kernerly, Sixth St., Winston-Salem, to erect residence; 7 rooms, sleeping porch and bath; wood; asphalt shingle roof; rift pine floors; electric lights; cost \$3500; Farquar heating system, \$250; C. Gilbert Humphries, Archt., 4th St., Winston-Salem. (Lately noted.)

Okla., Tulsa.—G. E. R. Kinnear let contract to M. L. Weir Contracting Co., Unity



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Bldg., Tulsa, to erect residence; 28.8x48.8 ft.; 1 story; bungalow type; brick, backed up with hollow tile; asphalt slate roof; wood joist floor construction; hot-blast heating system; city electric lights; concrete top finished sidewalks; cost \$5900; John V. Starr, Archt., 205 Seaman Bldg., Tulsa.

S. C., Laurens.—Wm. Gelder, New York, let following contracts to erect residence General contract, Charley Kloecker, Greenville, S. C.; plumbing and heating, Spartanburg (S. C.) Heating & Plumbing Co.; electric work, Mauldin Co., Greenville; plans by C. Gadsden Sayre, Anderson, S. C., call for bungalow type; 52x54 ft.; brick veneer and shingled; shingle roof; concrete, wood and hardwood floors; steam heat; electric lights; cost \$15,000. Address general contractor. (Lately noted.)

W. Va., Fairmont.—Greater Fairmont Investment Co. let contract to A. O. Evans, Fairmont, to erect sixteen 4-room and seven 5-room 2-story dwellings, and four 1-story dwellings; hardwood floors; cabinet mantels; laundry equipment in basements; water heaters, etc.

## GOVERNMENT AND STATE

Fla., Sanford—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., let contract to Algernon Blair, Montgomery, Ala., at \$50,189; limestone. (Lately noted.)

Ga., Atlanta—Cantonments.—Quartermaster General's Dept. let contract to Arthur Tufts, Candler Annex, Atlanta, and R. M. Walker, Charles Loridans, T. T. Flagler, W. W. Griffin and Forrest Adair, Jr., associates, all of Atlanta, to construct army cantonments at Silver Lake; estimated cost \$3,500,000; will probably let contract for water-works and sewerage system in connection with camp to J. B. McCrary Co., Atlanta, at about \$300,000; construction under supervision of Quartermaster's Dept.; Col. I. W. Littell, Washington, D. C., in general charge; J. N. Hazlehurst, Government Engr. (Lately noted.)

Ky., Louisville—Cantonment.—Quartermaster General's Dept. will construct cantonment 5 mi. from city, south of Audubon Park, to accommodate 32,000 troops; improvements to cost \$5,000,000; let contract to Mason & Hanger Co., Lexington and Richmond, Ky.; Col. I. W. Littell, Washington, in general charge.

Okla., Altus—Postoffice.—Treasury Department, James E. Wetmore, Acting Supervising Archt., Washington, D. C., let contract to W. D. Lovell, 1415 Eighth St. S. E., Minneapolis, Minn., to erect postoffice; masonry, reinforced concrete and slab construction; composition asphalt roof; slab floor construction; steam heat; gas and electric lights; cement sidewalks; construction begins in 30 days; contractor ready to purchase materials and he may be addressed. (Lately noted.)

Okla., Durant — Postoffice.—Treasury Department, Jas. E. Wetmore, Acting Supervising Archt., Washington, D. C., let contract to W. D. Lovell, 1415 Eighth St. S. E., Minneapolis, Minn., to erect postoffice; masonry, reinforced concrete and slab construction; composition asphalt roof; slab floor construction; steam heat; electric and gas lights; cement sidewalks; construction begins in 30 days; contractor ready to purchase materials, and he may be addressed. (Lately noted.)

S. C., Columbia—Cantonment.—Quartermaster General's Dept. let contract to Hardaway Contracting Co., Columbus, Ga., to erect army cantonments to cost approximately \$3,000,000.

Va., Petersburg — Cantonment.—Quartermaster-General's Dept. selected site and let contract to Rinehart & Davis, Charlottesville, Va., to construct cantonment; Col. I. W. Littell, Washington, D. C., in general charge.

Va., St. Juliens Creek—Ammunition Building.—Bureau of Yards and Docks, Navy Department, F. R. Harris, Chief, Washington, D. C., let contract to Joseph Seay, Petersburg, Va., to erect extension to Building No. 16, having concrete footings, brick walls, slate roof over sheathing, wood-finish floor over concrete base; cost \$8000; sub-contracts signed. (Lately noted.)

## HOTELS

Fla., Miami.—B. F. Davis will erect hotel for mechanics, etc.; 60 bedrooms, each 8x10 ft.; 46x148 ft.; 2 stories; open court 23x30 ft., with park and 2-story balcony; 2 stores 21x15 ft., each with 2-ft. projection; gymnasium, showers, etc.; electric lights; city water; concrete block walls; first floor,

cement; second floor, pine; white flint-coated composition roof; pine sash, casement and doors; contract for above materials let; construction by owner; following work not contracted: Terra-cotta tile, Spanish Imperial roof over 2 stores in front; furnishings, gymnasium equipment, etc. (Lately noted to cost \$10,000.)

Fla., West Palm Beach.—W. A. Weihe will erect 16-room addition to Salt Air Hotel; private baths; probably steam heat; also remodel present structure; redecorate, refurnish, etc.; C. J. Merlink, St. Petersburg, in charge of construction; will also erect 7-room bungalow.

Ga., Alston.—Alston Hotel Co. has plans by and let contract to J. T. Ragan, Vidalia, Ga., to erect hotel; 2 stories; 13 rooms; wood shingle roof; wood floors; cost \$4000.

Okla., Miami.—Miami Hotel Building Co. let contract at \$137,000 to F. H. Critz, Kansas City, Mo., to erect hotel; 7 stories and basement; 111 rooms; reinforced concrete; iron stairway; marble and tile lobby; stucco work; stone or terra-cotta exterior trim; brick body; plate-glass store front; 2 passenger and 1 freight elevator; steam heat; contracts for elevators, electric wiring and plumbing let; total cost \$200,000; plans by and construction under supervision of Alexander J. Bellis, Orear-Leslie Bldg., Kansas City. (Lately noted.)

Tex., Houston.—C. H. Milby let contract to C. B. Smith, Houston, for addition to Milby Hotel; 25x100 ft.; 6 stories; reinforced concrete; fireproof; composition shell and tar on concrete slab roof; concrete slab floors; city electric lights; cost \$50,000; Louis Glover, Archt., Houston; construction begins about July 1. (Lately noted.)

## MISCELLANEOUS

Md., Baltimore—Dairy and Stable.—Snelid Dairy Co. let contract to Louis Ullman, 854 E. Pratt St., Baltimore, to erect dairy and stable at 1048-52 Granby St.; 65x100 ft.; concrete and brick; slag roof; concrete floor; cost \$9600; construction begun. Address Geo. R. Callis, Jr., Archt., 55 Knickerbocker Bldg., Baltimore.

## RAILWAY STATIONS, SHEDS, ETC.

Mo., Kansas City.—Chicago, Burlington & Quincy R. R. Co., T. E. Calvert, Chief Engr., Chicago, let contract to Van Sant Construction Co., Kansas City, to erect 1-story brick freight house, 32x506 ft.

Okla., Tulsa.—St. Louis-San Francisco Ry. Co., F. G. Jonah, Chief Engr., St. Louis, let contract to Chas. Cunliff, St. Louis, for extension of freight house; cost \$100,000. (Lately noted.)

## SCHOOLS

Fla., Ocala.—Board of Commrs., State Institutions, Tallahassee, Fla., let contract to Halsemi, Buckland & Fitchner, Jacksonville, Fla., to erect school building; plans by H. F. Saxelby and W. B. Talley, Room 338, St. James Bldg., Jacksonville, call for brick walls; tile roof; about 42x70 ft.; wood joist floor construction; steam heat; electric lights; cost \$18,000. (Lately noted.)

Ga., Atlanta.—Atlanta-Southern Dental College, Dr. S. W. Foster, Prest., let contract to Geo. A. Clayton, Atlanta, to erect 2-story-and-basement brick building; 50x100 ft.; tar and gravel roof; wood floors cost \$25,000; A. N. Canton, Archt., Candler Bldg., Atlanta. (Lately noted.)

Ga., McKee.—Trustees let contract to W. W. Simmons, McKee, to erect school; 30x50 ft.; brick; slate roof; wood floors; cost \$6000 John T. Ragan, Archt., Vidalia; plumbing contract not let. Address Sam P. Aiken, McKee.

Ky., Buckner.—Oldham County Board of Education, La Grange, Ky., let contract to Frank Carter, La Grange, to erect school; 4 rooms; brick and frame; tile roof; wood floors; 45x60 ft.; Thos. J. Nolan, Archt., 310 Courier-Journal Bldg., Louisville. (Lately noted.)

La., New Orleans.—Tulane University Stadium Com. let contract to Lionel F. Fayrot, 307 Tulane Newcourt St., New Orleans, to erect first unit of stadium; plans by Frank G. Churchill, New Orleans, call for structure 110x60x38 ft.; reinforced concrete; fireproof; concrete columns; hollow tile and plaster walls; promenade floor under cover; seating capacity 1800; ultimate plans call for structure to seat 20,000. (Lately noted.)

Miss., Moselle.—School Board let contract to F. S. Covert, Meridian, Miss., to erect

school building for which \$8000 bonds were voted; brick and frame; asphalt shingle roof; N. W. Overstreet, Archt., Jackson, Miss. (Lately noted.)

Okla., Durant.—State Board of Affairs, Oklahoma City, let contract at \$4100 to Cook & McDonald, Oklahoma City, to erect heating plant at Southeastern State Normal; also let contract at \$14,219 to J. J. Rooney, Muskogee, Okla., to erect power-house.

Okla., Oklahoma City.—State Board of Affairs let contract at \$24,300 to Lisle-Dunning Co., Oklahoma City, to erect Russell Industrial School for Girls.

Okla., Oklahoma City.—State Board of Affairs let contract to Lisle-Dunning Construction Co., Oklahoma City, to erect Russell Industrial School for Girls; cost \$24,300.

Tenn., Knoxville.—City Commission let contract at \$15,587 to Toms & Harth, Knoxville, to erect addition to Maynard School; 7 rooms, including 4 classrooms, auditorium, gymnasium and domestic science room; let contract at \$6160 to J. W. Wethered, Knoxville, for plumbing. (Lately noted.)

Tenn., Tullahoma.—State let contract to Primm Lumber Co., Nashville, Tenn., to erect dormitory at Tennessee Vocational School for Girls; 30x100 ft.; fireproof; slate roof; reinforced concrete floors; cost \$30,000; Henry C. Hibbs, Archt., Fourth and First National Bank, Nashville. (Lately noted.)

Tex., Abilene.—Christian College let contract to W. E. Gorman, Abilene, to erect dormitory; 41x80 ft.; wood joist floor construction; cost \$3500; R. S. Glenn, Archt., Abilene. (Lately noted.)

Tex., Clarksville.—Clarksville Ind. School Dist., let contract to Anderson & Wallace, Fort Worth, to erect high school; brick; 60x100 ft.; 2 stories and basement; brick, stone and concrete; composition roof; wood joist and edge grain pine floors; steam heat; cost \$40,000; Sanguinet & Staats, Archts., Fort Worth. (Lately noted.)

Tex., Humble.—Harris County let contract to Henry Butel, Houston, to erect school in Dist. No. 26; frame; cypress shingle roof; wood floors; O. F. Holcombe & Co., Archts., 814 Stewart Bldg., Houston, Tex. (Lately noted.)

Tex., Morgan.—School Board let contract to Rabe Wilson, Mart, Tex., to erect high school; 3 stories; brick; electric lights; cost \$20,000; Geo. Burnett Co., Archt., Waco, Tex. (Lately noted.)

Tex., Sour Lake.—Sour Lake Ind. School Dist., let contract to M. C. Bowden, 1801 C, Galveston, to erect high school; about 135x135 ft.; reinforced concrete faced with brick; composition Barrett specification roof; concrete slab floor construction; cost \$75,000, exclusive of plumbing and mechanical equipment; M. L. Waller & Co., Archts., Fort Worth; construction begins in about 2 weeks. (Other contracts lately noted.)

## MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

## "WANTS"

**Abrasive Wheels, etc.**—Navy Department, Bureau Supplies and Accounts, Washington, D. C.—Abrasive wheels, Schedule 1228; seamless brass tubing, Schedule 1223; 12,000 sq. ft. hexagonal white vitrified tile, Schedule 1236; 102,000 ft. rubber air hose without fittings, Schedule 1233, etc.

**Air Compressor.**—Glover Machine Works, Marietta, Ga., J. J. Spalding, Jr., Secy., 1204 Third National Bank Bldg., Atlanta, Ga.—Prices on 100 to 125 H. P. air compressor, 100 lbs. pressure, directly connected preferred; voltage 2300, driven by A. C. motor.

**Boiler and Engine.**—See Sawmill Equipment.—Hudgdon Lumber Co.

**Boiler.**—See Pipe, Tanks, etc. (Oil).—Comanche Refining Co.

**Boiler.**—See Mining Equipment (Coal).—Flat Lick Coal Co.

**Boilers.**—See Clay-grinding, Drying and Pressing Machinery, etc.—Georgia Realty, Mining & Mfg. Co.

## STORES

D. C., Washington.—Joseph H. Chivell let contract to W. E. Garner & Son, 623 M St. N. W., Washington, to erect 6 brick stores, 1115-25 Water St. S. W.; cost \$6435.

Fla., Orlando.—V. W. Estes let contract to B. J. Lord to remodel store building on Orange Ave.

Miss., Vicksburg.—Wright Bros. Hardware Co. let contract to R. W. Boulton, Vicksburg, to erect store building; 24.8x145.6 ft.; brick and concrete; tin roof; heavy frame floors; city electric lights; cost \$5000; hot-air heat, \$200; handpower freight elevator, \$300; M. J. Donovan, Archt., Vicksburg. Address contractor. (Lately noted.)

N. C., Winston-Salem.—Home Real Estate, Loan & Insurance Co. let contract to Foglio Bros. Co., Winston-Salem, to erect store building; 27x91 ft.; 2 stories; brick; gravel roof; concrete floors; cost \$7000. (Lately noted.)

S. C., Columbia.—Perry-Mann Electric Co. let contract to C. M. Lide, Columbia, to remodel building at 1611 Main St.; cost \$10,000.

Tex., Dallas.—R. E. L. Sauer, 320 Commonwealth Bank Bldg., let contract to G. G. Johnson, Jr., Dallas, to erect store building; 36x30 ft.; mill construction; gravel or felt roof; concrete floors on first floor; second, wood; gas and electric fixtures; concrete sidewalks; F. W. Woerner, Archt., Sumpter Bldg., Dallas; construction begun.

Tex., Matador.—Matador Lodge No. 495, I. O. O. F., let contract to erect store and lodge building. (See Association and Fraternal.)

Tex., Port Arthur.—W. C. Tyrrell let contract to McDaniels & Hardford to erect building on Proctor St. for Household Furniture Co.; plans by F. W. Steinman, Beaumont, call for 2 stories; brick; plate-glass front; tapestry brick; copper marquise. (Lately noted.)

Tex., Waco.—Williams Dry Goods Co. let following contracts to erect store building; J. E. Johnson, general contract; Hill Bros. & Co., plumbing; Texas Lumber & Loan Co., heating and electric wiring; all contractors of Waco; plans by Ross & Cason, Waco, call for 3 stories and basement; foundation to permit erection of 3 additional stories; 83x165 ft.; mill or concrete construction; gravel roof; wood floors; steam heat; 1 freight and 1 passenger elevator; total cost \$90,000. (Lately noted.)

## WAREHOUSES

Okla., Tulsa.—Oklahoma Tool & Supply Co. let contract to Geo. H. Siedhoff Constr. Co., Tulsa, to erect warehouse and office building; 3 stories; 120x140 ft.; cement construction, roof and floors; steam heat; electric lights; cost \$50,000; Von Unworth & Wilson, Archts., Tulsa; construction begun. (Lately noted under Stores.)

Va., Norfolk.—L. J. Upton & Co. let contract to T. D. Murden, Norfolk, to erect 2-story brick warehouse.

**Boilers.**—See Packing-house Equipment.—Cape Fear Packing Co.

**Boiler, etc.**—Treasury Dept., Supervising Archt.'s Office, Washington, D. C.—Bids until July 6 for new boiler, etc. In United States postoffice at Columbia, Mo., in accordance with drawings and specifications; copies at Navy Dept. and office of custodian, Columbia.

**Bottles and Cases (Mailing; Sample).**—Pine Products Export Co., 204 American Bank & Trust Bldg., Savannah, Ga.—Addresses of manufacturers of sample mailing cases and bottles; suitable for mailing oil cases, foreign mail.

**Brick Machinery.**—F. Briggs Richardson, Surry, Va.—Names and addresses of manufacturers of brick machinery.

**Bridge.**—O. O. Worley, Clerk, Mitchell County Commrs., Camilla, Ga.—Interested to correspond relative to data and estimates on bridge across Flint River at Newton, Baker County.

**Bridge (Concrete) Construction.**—Macon County Commrs., Oglethorpe, Ga.—To open bids July 10 on 18x24-ft. long reinforced concrete bridge at Montezuma, Ga.; estimated cost \$1500; contractor to furnish materials; road to be graded by county force; plans and specifications may be seen at offices of Arthur Pew, Engr., 500 Forsyth Theater Bldg., Atlanta, Ga., and of A. H. Perry, Clerk, County Commrs., Oglethorpe.

**Bridge Construction.**—Washington County Supvrs., E. W. Wood, Chmn. Highway Commission, Greenville, Miss.—Bids July 2 to construct steel highway bridge across Granicus Bayou, according to specifications and diagram on file; detail drawing to be submitted to J. S. Allen, Ch. Engr., Greenville, on or before June 25; information on application.

**Building Materials.**—J. G. Crumbliss, Commr. Water Dept., 679 S. Gay St., Knoxville, Tenn.—Bids until June 23 at office of John W. Hill & Son, Engrs., 406 First National Bank Bldg., Cincinnati, Ohio, for steel roofing trusses, columns, bracing, corrugated iron or steel roofing and siding, metal ventilated metal window sashes, glazed and set steel rolled beams, steel balcony and stairway and pipe hand railing, constituting superstructure of new addition to river pumping station; plans and specifications on file with Mr. Crumbliss at Knoxville, and with Engrs. at Cincinnati.

**Cars.**—See Rails, Ties, etc.—Buckeye Lumber Co.

**Clay-grinding, Drying and Pressing Machinery, etc.**—Georgia Realty, Mining & Mfg. Co., Georgia Casualty Bldg., Macon, Ga.—Prices on grinding, drying and pressing (clay) machinery, boilers, engines, pumps, piping, pulleys and belting.

**Cranes (Locomotive).**—Henry Potts & Co., 650 Real Estate Trust Bldg., Philadelphia, Pa.—Several 15-ton locomotive cranes; standard gauge; 40 or 50-ft. boom.

**Coca Leaf Extract, Etc.**—Hopewell Beverage Corp., Drawer 50-A, Hopewell, Va.—Addresses manufacturers of extract of coca leaves and kola nut.

**Conduits.**—Baltimore (Md.) Board of Awards, City Hall.—Bids until June 29 to furnish (for Electrical Commission) 600,000 duct feet vitrified clay conduits; specifications issued by Raleigh C. Thomas, Chief Engr., City Hall Annex No. 1; bidders to submit samples.

**Cooperage Machinery.**—Florida Land Co., Montbrook, Fla.—To correspond with makers of machinery to manufacture slack cooperage mill from sawmill waste.

**Corn Mill.**—W. Fulton, Mt. Airy, N. C.—Small corn mill.

**Drainage.**—Black Bayou Drainage Dist., O. C. Kulicka, Secy., Greenville, Miss.—To let contracts July 12 for construction of 133 mi. drainage ditches; require 3 drag-line machines for excavation of 970,000 cu. yds. earth, and 7 floating dipper dredges for excavation of 3,700,000 cu. yds. earth; Morgan Engineering Co., Dist. Engr., 608 Goodwyn Institute Bldg., Memphis, Tenn.

**Drainage System.**—Sweetwater Drainage Dist. of Gwinnett County, Norcross, Ga.—Bids for construction of 18 mi. ditches, to drain 2000 acres bottom lands. For full information address John R. Cain, Norcross, R. F. D. No. 1.

**Drainage System.**—Supervisors De Soto County Limestone Drainage District, E. B. Wilcox, Pres., Arcadia, Fla.—Bids until June 30 to construct drainage system; 33 miles open drainage canals, bottom widths from three to twelve feet; 438,990 cubic yards excavation; four reinforced concrete drops; plans and specifications on file with Clerk of Circuit Court, Arcadia; with W. U. Montgomery, Secy. Supvrs., Limestone, Fla., and with Cavens & Kimmel, Engrs., Arcadia; complete set of plans, profiles and specifications obtainable from Engrs. for \$7.50 or copy of specifications for \$1.

**Driving Machine (Corrugated).**—See Wood-working Machinery—Dothan Hardwood Co.

**Dryers (Earth, etc.).**—Chas. R. Rife Co., 141 Central National Bank Bldg., St. Louis, Mo.—Prices on dryer for earth, etc.

**Elevator (Grain) Equipment.**—Dixie Seed Farms, Cordele, Ga.—Data and prices on elevator suction fan (or other suitable machinery) to take corn in the shuck, velvet beans in the hull, grain and seed from car or wagon and deposit on second floor of warehouse; prefer second-hand equipment.

**Elevators.**—See Packing-house Equipment. Cape Fear Packing Co.

**Elevators, Galvanized Steel, Etc.**—Panama Canal Earl I. Brown, General Purchasing Officer, Washington, D. C.—Bids until July 6 for elevators, galvanized steel, checkered steel plates, barbed wire, nuts, steel drums, garbage cans, hinges, taps, files, planes, rakes, mattocks, vises, engine lubricators, grease cups, drawer locks, padlocks, journal jacks, life preservers, kitchen work tables, water coolers, coffee pots, stock pots, tablespoons, dividers, rulers, waiters' aprons, paper napkins, paper towels, tracing cloth and paper, Bristol board, pencils, ferro-silicon and mixing varnish. Blanks, etc., relating to circular (No. 1150) obtainable at this office or offices Asst. Purchasing Agents, 24 State St., New York; Audubon Bldg., New Orleans, La., and Fort Mason, San Francisco; also from United States Engr. offices throughout United States.

**Engine.**—See Mining Equipment (Coal).—Flat Lick Coal Co.

**Engine (Kerosene or Gasoline).**—Gas Engine & Electric Co., 174 King St., Charleston, S. C.—Prices on kerosene (preferred) or gasoline engine, mounted on flat car, arranged to haul when ballasted other flat cars (2 mules capacity), loaded with logs, on wooden track of 36-in. gauge, tread of wheels on cars 6 in., wheels to be of cast iron.

**Engine.**—See Packing-house Equipment.—Cape Fear Packing Co.

**Engines.**—See Clay-grinding, Drying and Pressing Machinery.—Georgia Realty, Mining & Mfg. Co.

**Engines (Marine).**—Pennsylvania Equipment Co., Philadelphia, Pa.—Marine engines; 50 to 100 H. P.; any size or type; first-class condition.

**Engines (Oil).**—Lancashire Dynamo & Motor Co. of Canada, Ltd., 107 Duke St., Toronto, Canada.—Stationary oil engines for driving small generators, preferably two-cycle for operation with low grade oils. Prices desired f. o. b., packed for shipment, on standard engines from 5 to 50 H. P., with illustrations and specifications. Manufacturers should also state discount allowed on an order of 12 engines of any size. For shipment to Europe.

**Evaporators (Fruit).**—See Preserving, Pickling and Vinegar Machinery—Dawson Bros. Mfg. Co.

**Feed Mills.**—See Grain Elevator and Cleaning Machinery, etc.—Dixie Seed Farms.

**Fire Protection System.**—Bureau Yards and Docks, Navy Department, Washington, D. C.—Bids until June 25 for fire-protection system extension at Naval Ammunition Depot, Fort Mifflin, Pa.; drawing and specification (No. 2408) upon application to Bureau or to Commandant of Navy Yard, Philadelphia.

**Flour Mills.**—Geo. H. Wright, Wendell, N. C.—Data, prices, etc., on flour mills.

**Generator (Electric).**—See Packing-house Equipment.—Cape Fear Packing Co.

**Foundry Equipment.**—A. H. Burchard, 306 Pontiac Bldg., St. Louis, Mo.—Prices on complete equipment for 15-ton malleable foundry, including pattern shop.

**Graphite Milling Machinery.**—R. G. Rowland, Ashland, Ala.—Bids on graphite milling machinery.

**Garage Equipment.**—Hutson Barker Auto Co., Thos. Barker, Secy., Newport, Ark.—To open bids July 15 on equipment for garage.

**Grain Elevator and Cleaning Machinery, etc.**—Dixie Seed Farms, J. R. Kelly, Propr., Cordele, Ga.—Prices on machinery to shuck, shell and clean corn in shuck; to thrash and clean velvet beans in hull, and to grind corn in shuck, beans in hull, corn shucks and pea vines into feed; also elevator machinery for unloading cars and wagons.

**Heaters (Asphalt).**—See Road Machinery. Cornwall Construction Co.

**Heating and Ventilating.**—Board Regents, State Hospital for Insane, Columbia, S. C.—Bids (to be filed with C. F. Williams, Supt., by 12 o'clock July 11) for heating and ventilating equipment for female wards North and Talley Bldgs.; plans and specifications obtainable from Geo. E. Lafaye, Archt., 1003 Loan and Exchange Bank Bldg., Columbia.

**Hoist (Electric).**—Manufacturers' Selling Agency, Box 634, Birmingham, Ala.—Electric hoist: single drum, about 60-in. diam.,

with 75 H. P. 550-volt A. C. motor; drum to have capacity about 1100 ft.  $\frac{3}{4}$ -in. rope; give full description, weight and best resale price.

**Ice Machinery.**—W. D. Stedman, Ashboro, N. C.—Data and prices on equipment for ice plant.

**Ingot Manipulators.**—Bureau of Supplies and Accounts, Navy Department, Washington, D. C.—Bids until June 26 for delivering ingot manipulators f. o. b. South Charleston, W. Va.; apply for proposals to Bureau.

**Knitting Machinery.**—R. E. Grabel, Secy., Chamber of Commerce and Agriculture, Gaffney, S. C.—Prices on equipment for hosiery mill.

**Leather, etc.**—Louis Boutboul & Co., 8 Rue de la Commission, Tunis, Africa.—To represent manufacturers of leather for shoes, hides, box calf, kid in black and colors, furniture for dwellings, polished Texas rice, etc.

**Levee Construction.**—Office Third Mississippi River Dist., P. O. Box 404, Vicksburg, Miss.—Bids until July 11 to construct 1,265,000 cu. yds. levee work; information on application.

**Level and Rod (Engineers).**—G. H. Harvey, Holly Hill, S. C.—Price on engineers' "Y" level; state make and condition; also wants price on self-reading rod.

**Limekilns.**—G. H. Copeland, Calle Damas 186, Tampico, Mexico.—Continuous oil-burning limekiln of 20 tons daily capacity.

**Loader (Gasoline).**—T. M. Thornton, Hattiesburg, Miss.—Prices on gasoline loader, capacity 400 or 500 yds. daily; with  $\frac{1}{2}$ -yd. dipper; light and strong.

**Locomotive.**—See Rails, Cars, etc.

**Locomotive.**—Navy Department, Bureau Supplies and Accounts, Washington, D. C.—120,000-lbs. steam locomotive, Schedule 1238.

**Lumber.**—City, Fred Fries, Clerk, San Antonio, Tex.—Bids until July 12 on material for construction retaining walls along San Antonio River, in accordance with plans and specifications in office of City Engr.; 27,000 lin. ft. cypress piling, 12x12 in. by 27 ft., in place, according to specifications and plans; 121,000 lin. ft. cypress lumber, 3x12 in. by 10 ft., in place, according to specifications and plans; excavation for 5500 ft. trench per cu. yd., back-filling per cu. yd., according to specifications and plans; 27,000 lin. ft. creosoted piling, 12x12 in. by 27 ft., in place, according to specifications and plans; 121,000 lin. ft. creosoted lumber, 3x12 in. by 10 ft., delivered on work; 27,000 lin. ft. cypress piling, 12x12 in. by 27 ft., delivered on work; 121,000 lin. ft. cypress lumber, 3x12 in. by 10 ft., delivered on work; 27,000 lin. ft. heart pine piling, 12x12 in. by 27 ft., delivered on work; 121,000 lin. ft. heart pine lumber, 3x12 in. by 10 ft., delivered on work; 27,000 lin. ft. sap pine piling, seasoned, 14-in. head, 10-in. toe, 27 ft. long, f. o. b. San Antonio; 121,000 lin. ft. sap pine kiln-dried lumber, 3x12 in. by 10 ft., f. o. b. cars San Antonio.

**Machine Tools.**—Whiteville Lumber Co., Vineland, N. C.—Prices on following second-hand machine tools, in good condition: Engine lathe, not less than 18-in. swing nor less than 10-ft. long; shaper; planer; bolt threading machine; power hack saw; hydraulic wheel press, 100 tons or over. Give specifications.

**Machine Tools.**—Navy Department, Bureau Supplies and Accounts, Washington, D. C.—Motor-driven 24-in. upright drill, double on column emery grinder and motor-driven grindstone, Schedule 1244; 4 back-gear engine lathes, 12 heavy projectile boring lathes, 17 heavy projectile turning lathes, eleven 36-in. by 20-ft. motor-driven triple-gear lathes, and four 36-in. by 14-ft. triple-gear lathes, Schedule 1252; motor-driven back-gear screw-cutting toolroom lathe, Schedule 1244; three 120-in. shrinkage turning lathes, Schedule 1239; 6000-lb. ingot manipulator, Schedule 1243; motor-driven milling machine, Schedule 1242; variable speed motor-driven milling machine, Schedule 1244; 8 heavy-duty combination thread milling and turret machines, two 40-in. cutting-off saw machines, 3 heavy-duty 24-in. turret machines; 4 heavy-duty motor-driven 24-in. turret machines, Schedule 1252; universal woodworking machine, Schedule 1240.

**Manual Training Equipment.**—Board of Education, Hume-Fogg High School Bldg.,

Nashville, Tenn.—Bids until June 25 to furnish equipment for manual training shops, mechanical drawing rooms, domestic science rooms, domestic art rooms, lunch rooms, etc., of Warner, Clemens, Elliott and Pearl Public Schools; specifications, etc., from Board of Education.

**Manufactures Generally.**—F. Heynert, Hotel McAlpin, New York, N. Y.—Interested (for export to Dutch East Indies) in following: Bicycles; automobile tires; socks; stockings; garters; small iron and copper shoemakers; shoes; shoe buckles; shoe laces; shoe heels of wood; buttons; shoerings and knobs; cheap watches; brushes (ripolin included); waterproof raincoats and raincapes; pins; safety pins; needles; small ironware (locks, bolts, wire nails, etc.); mirrors; press-buttons; straw and felt hats; razors; zephyrwool; shot; cement; Agerbach candies; salmon in flat tins; biscuits; sugar plums; unused old newspapers; galvanized corrugated iron sheets; nickel in small blocks; hair combs; umbrellas; parasols; towels; toys; singlets; leather goods (belts, pouches, etc.); firestones; inks; writing paper in fancy boxes with envelopes; school writing books; packing paper; chemicals; Victor shears; slate pencils; glass beads; celluloid beads and all other kinds; files; screws; Belgian iron in bars; tacks; slippers, etc.

**Mining Equipment (Coal).**—Flat Lick Coal Co., J. W. Taylor, Secy., Box 318, Pineville, Ky.—Prices on 20 to 40 tons gauge rails, 12 or 16-lb., with spikes; 36-in. gauge, 1-ton mining cars, new or used; new or used engine; boiler; hoisting apparatus.

**Mining Machinery (Coal).**—Edgar T. Brown, Clarksburg, W. Va., Secy.-Treas. Mutual Coal Co. (of Fairmont, W. Va., with mines at Flemington).—Prices on coal-mining machinery.

**Mining Machinery (Graphite).**—Republic Graphite Co., A. P. Smith, Mgr., Ashland, Ala.—Bids on graphite-developing machinery.

**Mining Machinery (Coal; Electric).**—Caudill Coal Co., L. W. Fields, Secy.-Mgr., Whitesburg, Ky.—Prices on electrical machinery and supplies.

**Nailer.**—M. L. Buhler Co., Murrah Bldg., Columbus, Ga.—Second-hand Morgan nailer; good condition; name lowest cash price first letter.

**Packing-house Equipment.**—Cape Fear Packing Co., 404 Southern Bldg., Wilmington, N. C.—Bids July 11 for: Reinforced concrete and brick packing-house; insulation; elevators; boilers; engine; generator and switchboard; special packing-house equipment; refrigerating machinery and piping; steam fitting, hard and grease lines; plans and specifications at office of Cape Fear Packing Co. and Atlanta Builders' Exchange, Atlanta, Ga.; obtainable on application to Wilson & Sompayrac, Archts., Palmetto Bldg., Columbia, S. C., and to Packers' Architectural & Engineering Co., Manhattan Bldg., Chicago.

**Paving.**—Board of Control, Norfolk, Va.—Bids until June 29 to improve Church St. from Queen to Granby St.; specifications, etc., from City Engr.

**Paving.**—Baltimore (Md.) Board of Awards, City Hall.—Bids until June 27 to pave with cement concrete alleys as listed in private alley contracts Nos. 42, 43 and 44; specifications and proposal sheets on application to R. M. Cooksey, Highways Engr., City Hall.

**Paving (Asphalt Resurfacing).**—City of Knoxville, Tenn., John W. Flenniken, Commissioner Streets and Public Improvements.—Bids until June 26 to resurface 35,000 sq. yds. old brick pavement with sheet asphalt; bids received on 1 and  $\frac{1}{2}$ -in. and 2-in. wearing surface per sq. yd. and binder per ton; J. B. McCalla, City Engr.

**Paving.**—City of Danville, Ky., W. O. McIntyre, Mayor.—Bids until June 28 to improve Main St. from 4th to 2d St. with wood block, sheet asphalt, bituminous concrete and vitrified block; concrete sidewalks; plans and specifications by S. F. Creedon, Engr., on file with City Clerk.

**Paving.**—Julian Kendrick, City Engr., Birmingham, Ala.—Bids until June 19 to pave sidewalks under Improvement Ordinance No. 357-C; specifications may be obtained and plans examined at office City Engr.

**Paving.**—City of Bessemer, Ala., S. R. Batson, City Engr.—Bids until July 3 to pave with brick on concrete foundation Second Ave. from 19th to 21st Sts.



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**Pipe Fittings, etc.**—Baltimore (Md.) Board of Awards, City Hall.—Bids until June 27 to furnish Water Dept. with brass service pipe fittings, miscellaneous iron castings, brass and bronze castings, lead-lined wrought-iron pipe, cast-iron pipe and fittings, and pig-lead as may be required from June 27 to Dec. 31; specifications and proposal forms obtainable from Walter E. Lee, Water Engr., City Hall; charge of \$5 for each set of specifications.

**Pipe, Tanks, Etc. (Oil).**—Comanche Refining Co., C. B. Hale, Secy., Lawton, Okla.—Prices on 66-in. 16-ft. boiler; tanks; pipe, etc., for oil refinery.

**Power-plant Equipment.**—Bureau Yards and Docks, Navy Dept., Washington, D. C. Bids until June 18 for furnishing and installing turbo-alternators, condensers, pumps, exciters, boilers, stokers, draft fans and piping at Naval Training Station, Newport, R. I.; specifications (No. 2362) upon application to Bureau or to commandant naval station.

**Preserving, Pickling and Vinegar Machinery.**—Dawson Bros. Mfg. Co., L. J. Dawson, Mgr., Lynchburg, Va.—Prices on jelly filling machines, labeling machine, copper kettles, tanks, trucks, pressers, evaporators, drying machinery, pumps, etc.

**Pulleys and Belting.**—See Clay-grinding, Drying and Pressing Machinery.—Georgia Realty, Mining & Mfg. Co.

**Rail.**—See Mining Equipment (Coal).—Flat Lick Coal Co.

**Rails.**—Pennsylvania Trading Co., 410 Pennsylvania Bldg., Philadelphia, Pa.—Prices f. o. b. point of shipment on following relay rails: 500 tons 30 to 40 lb.; 1200 tons, 45 to 60 lb., and 800 tons, 46 to 90 lb.

**Rails, Cars, etc.**—Buckeye Lumber Co., Chillicothe, O.—1 to 6 mi. 30 to 40-lb. rails and fastenings; buy on cars or ties; also buy narrow-gauge geared locomotive and cars; Virginia delivery.

**Railroad Grading.**—White Oak Lumber Co., Putnam, Va.—Bids until July 10 for grading 6 mi. standard-gauge log road in Russell and Buchanan counties, according to plans and specifications at Putnam and at office of J. P. Williams, Jr., Engr., Tazewell, Va.

**Refrigerating Machinery.**—See Packing-house Equipment.—Cape Fear Packing Co.

**Rice Mills.**—Lynchburg Iron & Metal Co., 1200 Commerce St., Lynchburg, Va.—Correspondence with rice millers that grind rice flour.

**Road Construction.**—Lincoln County, Office of Chancery Clerk, R. W. McNair, Brookhaven, Miss.—Bids July 5 to improve 19.7 mi. road. For information address C. F. Sherman, Engr., McComb, Miss.

**Road Construction.**—Highway Dept., Board of State Engrs., Room 104, New Orleans Court Bldg., New Orleans, La.—Bids until July 2 to construct with earth Section No. 1 of St. Joseph-Winnboro Highway, 3.03 mi., Tensas Parish; information as to location, character of work, etc., obtainable from Highway Dept.; Duncan Buie, State Highway Engr., New Orleans.

**Road Construction.**—Oktibbeha County Supvrs., Starkville, Miss.—Bids until June 27 to construct roads in Supvrs. Dist. 2 and 5; about \$100,000 available; plans and specifications on file office of Clerk of Board, and are obtainable from E. C. Thomas, Engr., Nash Bldg., Starkville.

**Road Construction.**—Good Roads Com. of Dist. No. 1, C. W. Schamber, Chrmn., Meridian, Miss.—Bids until July 3 to apply bituminous wearing surface on Causeyville Rd., 45,000 sq. yds.; Poplar Springs Rd., 25,000 sq. yds., and Asylum Rd., 18,000 sq. yds.; specifications from J. T. Pinkston, Engr., Courthouse, Meridian.

**Road Construction.**—Putnam County Commissioners, J. M. Henson, Clerk, Winfield, W. Va.—Bids until July 9 to construct 6 mi. road in Pocatalico Dist.; plans, specifications, etc., on file after July 2 with Ernest Bruce, Road Engr., Poca, W. Va., and J. M. Henson, County Clerk.

**Road Construction.**—Yazoo County Commissioners, Supvrs.' Dist. No. 3, T. H. Craig, Chrmn., Yazoo City, Miss.—Bids until July 3 for road improvements: 30 mi. clearing and grubbing, 30 mi. subgrade, 300,000 cu. yds. grading; 1134 lin. ft. 15-in., 2040 ft. 18-in., 1441 ft. 24-in. and 588 ft. 30-in. pipe; 190 cu. yds. plain and 280 cu. yds. reinforced concrete; 50,000 cu. yds. slag,

gravel or stone; 212,000 sq. yds. asphalt surface; bids invited as per proposals on asphaltic concrete; brick, slag, gravel or stone with asphalt wearing surface; average haul 4 mi.; plans, specifications, etc., on file office of Chancery Clerk Yazoo City, and of G. R. Thomas, Engr., Yazoo City.

**Road Engineers.**—Alachua County Bond Trustees, Special Road Dist. No. 1, J. B. Howard, Clerk, Gainesville, Fla.—Meets June 28 to consider employing engineers to prepare plans for road and bridge construction provided by recently-announced \$500,000 bonds.

**Road Machinery.**—Cornwall Construction Co., contractor, Tampa, Fla.—Prices on 5-ton steam, gasoline or kerosene road roller for penetration macadam road work; also asphalt heater and spreader; new or second-hand; first-class condition.

**Runway, etc.**—Commrs. Port of New Orleans, La.—Bids until June 22 for construction of lumber platform and runway for public grain elevator on river front; plans and specifications on file at office Ford, Bacon & Davis, Engrs., 921 Canal St., New Orleans.

**Sawmill Equipment.**—Hudgeon Lumber Co., Richard Reid, Secy., Star City, Ark.—Prices on boiler and engine; saw rig; gang edger; cut-off saw; dust conveyor.

**Sewer Construction.**—E. D. Bass, Commr. Dept. of Streets and Sewers, Chattanooga, Tenn.—Bids until June 25 to construct storm-water sewer in Orange Grove Dist.; bids on construction entirely of brick masonry; in part of plain concrete and in part of brick; also of reinforced concrete pipe combined with brick tunnel section, brick manholes and brick junction; proposal forms, specifications, etc., on application with \$5 deposit.

**Sewer Construction.**—City of Clarksdale, Miss., W. S. Bobo, City Engr.—Bids until June 19 to construct sanitary sewer system comprising 4400 ft. 12-in. and 1600 ft. 8-in. vitrified sewer pipe, manholes, branches, etc.; specifications from City Engr. for \$5.

**Sewer Construction.**—Commrs. First Sewer Dist., Charles L. Provost, Secy., New Iberia, La.—Bids until June 29 on sanitary sewer system and sewage-disposal plant; plans and specifications on file office of Sewer Commission Secy. and office of Engr., Xavier A. Kramer, Magnolia, Miss.; copies of specifications, forms, etc., obtainable for \$10 on application to Engr. (Lately noted.)

**Sewer Construction.**—City of Lambert, Miss.—To receive bids July 3 for construction of sewer system, including 2 mi. sewers and a septic tank; engineer will be at clerk's office and plans and specifications may be seen there on July 2 and 3.

**Sewer Construction.**—See Water-works and Sewer Construction.—Board Trustees, Louis Leverett, Prest., Rush Springs, Okla.

**Sewer Construction.**—Dist. Commrs., Room 509 District Bldg., Washington, D. C. Bids until June 21 to construct sewers; 550 lin. ft. 4-ft. 6-in. span masonry sewer, including timber and piling foundation; proposal forms, specifications and information from Ch. Clerk Engr. Dept., Room 427 District Bldg.

**Sheet Lead, Lead Pipe, Milling Machine, etc.**—Bureau Supplies and Accounts, Navy Department, Washington, D. C.—Bids until June 26 for delivering alcohol, dummy cartridges, clocks, condenser tubes, sheet lead, lead pipe and milling machine at navy-yard, Washington; apply for proposal to Bureau.

**Shoes.**—Madam Sabrol, No. 3 Place Deepres, at Perpignau, France.—Illustrated catalogues of footwear for women and children.

**Soap.**—W. D. Lewsey & Co., cleaning establishment, 70 Frederick St., Port-of-Spain, Trinidad.—To represent manufacturers of blue and other soaps for domestic purposes.

**Sprinkling System.**—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C.—Bids until July 6 for underground lawn-sprinkler system for United States postoffice and courthouse, Charlotte, N. C.; specifications and drawing obtainable from office of custodian, Charlotte, at discretion of Supervising Archt.

**Steel Furnace (Electric).**—Matthews Iron & Steel Co., Y. A. Dyer, Gen. Mgr., Rome, Ga.—Data and prices on electric steel furnace equipment.

**Stokers (Mechanical).**—Treasury Dept., Supervising Archt.'s Office, Washington, D. C.—Bids until July 5 for mechanical stokers, etc., in United States custom-house and postoffice at Cincinnati, O., in accordance with specifications; copies had at Treasury Dept. and office of custodian, Cincinnati.

**Street Improvements.**—City of Hamilton, Tex.—Bids until June 21 for grading and surfacing, together with bridges, culverts and street crossings, on 3 mi. of streets; specifications, plans, etc., on file with City Clerk at Hamilton, and with L. V. Reese, Engr., Hamilton and Hico, Tex.; copies of specifications obtainable from engineer for \$5.

**Tanks (Oil).**—See Pipe, Tanks, Etc. (Oil).—Comanche Refining Co.

**Textile Products.**—F. Heynert, Hotel McAlpin, New York, N. Y., representing G. Hoppensdott of Dutch East Indies.—Interested (for export to Dutch East Indies) in following: Cotton piece goods; lawn prints; dyed lawns; check, stripe and fancy lawns; pongees, printed as well as dyed; died and printed broadcases; dyed and printed crepes; serges; white shirtings; white lawns; Persian lawns; striped woven drills; striped shirtings; shirting prints; dyed and printed voiles; white and printed handkerchiefs; batiste prints; zephyrs; oxfords; black and cold velvets and pluche; mohairs; cotton and half-cotton canvas; ball thread; mercerized yarn; thread on reels; cotton and linen laces.

**Trucks.**—See Preserving, Pickling and Vinegar Machinery.—Dawson Bros. Mfg. Co.

**Tractor (Logging).**—J. W. Craber, sawmill operator, Campville, Fla.—Correspondence with manufacturers of tractor, drag machine or engine.

**Tubing, Pipe Fittings, etc.**—Bureau of Supplies and Accounts, Navy Department, Washington, D. C.—Bids until June 26 for delivering alcohol, brass tubing, condenser tubes, gravel, hardware, pipe fittings and valves, Indian red, sheet tin and turpentine at navy-yard, Norfolk; apply for proposals to supply office, navy-yard, Norfolk, or to Bureau.

**Veneer Hog.**—Pee Dee River Veneer Co., Drake, S. C.—Second-hand veneer hog.

**Ventilating System.**—Bureau Yards and Docks, Navy Dept., Washington, D. C.—Bids until July 2 for ventilating system, including blowers, motors, plenum chambers, ventilators, air ducts and accessories in building No. 17, United States Navy-yard, Philadelphia; drawing and specification (No. 2424) upon application to Bureau or to commandant of navy-yard.

## RAILROAD CONSTRUCTION

### RAILWAYS

**Ark., Little Rock.**—A railroad spur will be built from Argenta to the proposed army cantonment near Little Rock. About 4 mi. of track will be constructed. E. A. Hadley, Ch. Engr. Missouri Pacific System, St. Louis, Mo., may give information.

**Fla., Malone.**—W. S. Wilson is building a 9½-mi. connection between the Alabama, Florida & Southern R. R., of which he is president, and a railroad which runs from Cowarts to Cottonwood, Ala., that he has recently bought. When this is completed he will build a line from Malone to Greenwood, Fla., 6 mi. All will be completed by the middle of autumn and will be sold to the Alabama, Florida & Southern R. R. Co.

**Fla., Titusville.**—Florida East Coast Railway is reported surveying from Okeechobee to West Palm Beach for the possible construction of a connecting line about 60 mi. long. E. Ben. Carter, St. Augustine, Fla., is Chief Engr.

**Ga., Atlanta.**—Southern Railway will build double-track spur, about 1 mi. long, from Chamblee to the army cantonment near Atlanta, also yard tracks at the camp. W. H. Wells, Washington, D. C., is Chief Engr. of Construction.

**Ga., Byromville.**—Construction is progressing on the Americus & Atlantic R. R., trestle over Flint River being completed at Coperas Bluff and line graded to Methven's Store; right of way secured from there to Americus. J. S. Morton of Byromville is Prest.; Frank Lanier, V.-P., and Crawford Wheatley, Secy.-Treas., both of Americus.

**Ga., Lincolnton.**—Construction has begun

**Veneer Machinery.**—Chas. A. McLean, 412 Citizens' Bank Bldg., Norfolk, Va.—Veneering lathe and clipper; preferably 66-in.; good shape.

**Water-works.**—City of Winchester, Ky., S. B. Tracy, City Clk.—Bids until July 6 on construction of complete water-works plant, including 4 rapid-sand filters, each of 500,000 gals. daily capacity; sedimentation basin; intake; filter-house; power-house; 8 mi. 12-in. force main from Kentucky River to Winchester; standpipe of 275,000 or 500,000 gals. capacity, 70 ft. high; distribution system of 12 mi. 12, 10, 8 and 6-in. mains, valves, hydrants, etc. Manufacturers of pumping equipment for 250 lbs. per sq. in. working pressure; boilers for 150 lbs. working pressure; 200 H. P. crude oil engine; standpipes and water-works materials, and general contractors can obtain copy of specifications on application to City Clk., Winchester; blueprint drawings obtainable on payment, (for printing and postage) from R. M. Burns, 27 Fifth St., Cincinnati, Ohio; estimated cost of improvements \$180,000; Edgar B. Kay, Ch. Engr., Winchester.

**Water-works and Sewer Construction.**—Board Trustees, Louis Leverett, Prest., Rush Springs, Okla.—Bids until June 25 to construct system of water-works and sanitary sewers; plans and specifications on file office of Mackintosh-Walton Co., Engr., 1022 State National Bank Bldg., Oklahoma City.

**Well-drilling.**—Town of Clinton, Miss., R. R. Hardy, Clerk.—Bids until July 1 on drilling deep well of following dimensions: 4-in. well with guaranteed capacity of 50,000 gals. every 24 hrs.; 6-in. well of same capacity; also 3-in. well, size not determined; bidders requested to estimate on each well.

**Wire Rope.**—John G. Duncan Co., 308 W. Jackson Ave., Knoxville, Tenn.—Dealer's price, for immediate delivery, on 7000 ft. second-hand rope, ¾ in. and ¾ in.; suitable for cableway work; carry 1 ton in weight; good guy rope would answer.

**Woodworking (Brake Block) Machinery.**—Doherty-Walsh Roller Co., 51 Neron Pl., New Orleans, La.—Woodworking machine to manufacture wooden brake blocks; machine to have special radius table or device for making concave and convex curves on blocks.

**Woodworking Machinery.**—J. A. Giles, 308 Geer Bldg., Durham, N. C.—Machinery to manufacture crutches.

**Woodworking Machinery (Egg Case).**—Dothan Hardwood Co., Dothan, Ala.—Prices on lathe for cutting slides of egg cases; swinging pendulum, heading saw; cleat nailer; and corrugated driving machine.

on the extension of the Washington & Lincolnton R. R. from Lovelace to Lincolnton, about 7 mi. J. R. Dyson, Washington, Ga., is Prest.

**Md., Elkton.**—Delaware & Maryland Traction Securities Co., capital \$5,000,000, has been chartered at Dover, Del., to build an electric railway in Delaware and Maryland. Incorporators: De Armond Linder, Franklin Bank Bldg., Philadelphia, Pa., and R. Edward Ives and Chas. A. Donnelly, also of that city.

**Miss., Leakesville.**—Contract for the extension of the Alabama & Mississippi Railroad, from Leakesville, about 35 mi., to connect with the Wausau Southern Lumber Co.'s road to Laurel, Miss., is reported let to Powell & Co. of Hattiesburg, Miss. This includes bridges. N. E. Turner, Vinegar Bend, Ala., is Prest.

**N. C., Goldsboro.**—Virginia Box & Lumber Co. of Goldsboro is reported to have made survey for a railroad from Goldsboro to Swansboro, at the mouth of Whiteoak River, near Bogue Inlet, about 65 mi.

**Okla., Dewar.**—Henryetta-Dewar-Kusa Traction Co. of Henryetta is reported organized to build an electric railway, from Henryetta to Dewar and Kusa. Capital \$250,000. Incorporators: Barclay Morgan, G. W. Burnett, J. J. Harrison, H. K. Christopher and L. E. Drummond of Dewar, and Morton Henderson of Kusa, Okla.

**Okla., Quapaw.**—Allhands-Hedges Construction Co. of Springfield, Mo., is contractor for the Miami Mineral Belt Railroad under construction from Quapaw to Baxter

(Continued on Page 82.)

Capital and Surplus  
\$4,000,000



Total Resources  
\$38,000,000

## The Largest National Bank in the South

Liberal Accommodations to Manufacturing Corporations

**MERCHANTS-MECHANICS  
FIRST NATIONAL BANK  
OF BALTIMORE**

**The National Exchange Bank  
OF BALTIMORE, MD.**  
Hopkins Place, German and Liberty Sts.  
Capital \$1,500,000.  
March 30, 1915, Surplus and Profits,  
\$850,000.00.

OFFICERS.  
WALDO NEWCOMER, President.  
SUMMERFIELD BALDWIN, Vice-Pres.  
R. VINTON LANSDALE, Cashier.  
C. G. MORGAN, Asst. Cashier.  
Accounts of Mercantile Firms, Corpora-  
tions, Banks, Bankers and Indi-  
viduals Invited.

**Maryland Trust Company**  
BALTIMORE

Capital \$1,000,000  
TRANSACTS A GENERAL TRUST AND  
BANKING BUSINESS  
Correspondence and Interviews  
invited

**The Palmetto National Bank**  
OF COLUMBIA  
CAPITAL \$500,000.00  
Surplus and Undivided Profits \$250,000.00  
COLUMBIA, S. C.

**WE BUY BONDS** CITY, COUNTY,  
SCHOOL and DISTRICT  
Correspondence Invited from Officials and Contractors  
**SIDNEY SPITZER & CO.** New York Chicago Toledo  
Cincinnati Los Angeles  
Southern Branch: BELL BUILDING, MONTGOMERY, ALA.

## Banks and Bankers

Write us now for our  
special offer on

## Pocket Check Books

We are making a won-  
derful proposition, and  
our salesmen cannot  
reach all of you.

**Young & Selden Co.**

BANK STATIONERS BALTIMORE, MD.

Lithographing, Printing, Envelopes  
Blank Book Making, Book Binding  
Letter Heads, Office Supplies  
Steel Die Work

## Suggestions How to Invest

for both large and small  
investors will be given  
those who write for our  
Circular No. AG-10.

**A. B. Leach & Co.**

Investment Securities

62 Cedar St., New York

Chicago Philadelphia Buffalo  
Boston Baltimore

## BONDS

City, County, School, Road, Drain-  
age, Water—bought and sold.  
We purchase direct from contractors  
**THE HUGH RIDENOUR CO.**  
COLUMBUS, OHIO

**Southern Cotton Mill Stocks**  
**A. M. LAW & COMPANY**  
DEALERS  
SPARTANBURG, S. C.

**POWELL, GARARD & CO.**  
39 S. La Salle Street  
CHICAGO, ILL.  
We Buy Southern Municipal Bonds  
(County, City, School, Road and Drain-  
age District).

**JOHN NUVEEN & CO.**  
First National Bank Building, CHICAGO  
We purchase SCHOOL, COUNTY and  
MUNICIPAL BONDS. Southern Municipal  
Bonds a Specialty.  
Write us if you have bonds for sale.

**First National Bank**  
RICHMOND, VIRGINIA  
Capital and Surplus - - - - \$3,000,000  
JNO. B. PURCELL, President.  
JNO. M. MILLER, JR., Vice-Pres.  
W. M. ADDISON, Cashier.

**THE BANK OF ALABAMA**  
ENSLEY, ALABAMA  
R. A. TERRELL - President  
J. W. MINOR - Vice-President  
FOSTER HAMILTON Cashier  
We Solicit Your Business

**MUNICIPAL BONDS**  
City, County, Road and Drainage  
Bought from Municipalities or from  
CONTRACTORS  
**WALTER E. ORTHWEIN**  
Established 1898 229 N. 4th St., St. Louis, Mo.

**Municipal Bonds  
BOUGHT**  
from Contractors and Municipalities  
**STACY & BRAUN**  
Second National Bank Bldg., TOLEDO, O.

**WE BUY  
Municipal Bonds**  
ISSUED BY  
Counties, Cities, School Districts  
and Road Districts.  
WRITE US  
**CUMMINGS, PRUDDEN & CO.**  
Second National Bank Building  
TOLEDO, OHIO

## RAILROAD CONSTRUCTION

(Continued from Page 81.)

Spring, Kan., 12 mi., with 8 mi. of sidings;  
line partly in operation; route via Century,  
Cardin and Picher, Okla. J. A. Frates is  
Pres.; J. A. Frates, Jr., Gen. Mgr., both  
of Springfield. W. Matthews, Box 205,  
Miami, Okla., is Chief Engr. Line includes  
8 timber bridges.

Tex., Midland.—Midland & Northwestern  
Ry., now building from Midland to Seminole,  
Tex., 65 mi., is reported to have laid track  
to Fasken, about 35 mi.

Tex., Newton.—Wier-Reynolds Lumber Co.  
of Houston, Tex., is building a railroad  
from Newton to Little Cow Creek. B. F.  
Bonner will be president of the railroad  
which is not yet chartered. R. W. Wier is  
Pres. of the lumber company.

Va., Putnam.—Bids for the construction of  
6 mi. of standard-gauge railroad in Russell  
and Buchanan counties, Va., are being in-  
vited by the White Oak Lumber Co. at  
Putnam. J. P. Williams, Jr., Tazewell, Va.,  
is Engr.



This bank offers a special service  
to Southern brokers, manufac-  
turers, shippers and banks for  
the collection of drafts, particu-  
larly B/L drafts on Chicago  
and other Northern points.  
Please write us for particulars.

We also solicit correspondence  
and interviews with high-grade  
Southern concerns regarding a  
direct Chicago banking connec-  
tion.

**UNION TRUST COMPANY**  
CHICAGO

Capital and Surplus, \$3,000,000.00  
Deposits, \$34,000,000.00

Established 1869

## Incorporate Under DELAWARE LAWS

Complete information on application.  
**Delaware Registration Trust Co.**  
900 Market St. Wilmington, Del.  
J. Ernest Smith, President and General Counsel.  
Chas. Warner Smith, Vice-President.  
Harry W. Davis, Secretary and Treasurer.  
Charles B. Bishop, Assistant Secretary.

## We Buy Bonds

City, County, School and Road, from  
Municipalities and Contractors.

WRITE  
**THE PROVIDENT SAVINGS BANK  
& TRUST CO.**

CINCINNATI OHIO

**FOR SALE** Timber, Coal, Iron, Ranch  
and other Properties  
Southern States. West Indies. Mexico.  
**GEO. B. EDWARDS**  
(Broker)

Tribune Building NEW YORK, N. Y.  
Confidential Negotiation. Investigations.  
Settlements and Purchases of Property.

## D. H. BURGESS & CO.

Exporters Importers

P. O. Box 115 PETERSBURG, VA.

Write us your needs in all  
lines of business

Write us about Investments in Birmingham  
Real Estate.

**Jemison Real Estate & Insurance Co.**

Real Estate  
General Insurance, Loans

311 N. Twentieth St. BIRMINGHAM, ALA.

## FINANCIAL NEWS

The MANUFACTURERS RECORD invites infor-  
mation about Southern financial matters.  
Items of news about new institutions, divi-  
dends declared, securities to be issued, open-  
ings for new banks and general discussions  
of financial subjects bearing upon Southern  
matters.

### FINANCIAL CORPORATIONS

La., Vinton.—Masonic Building Associa-  
tion, Inc., capital \$12,000, is chartered. S. J.  
Welsh, Pres.; A. H. Forman, V.-P., and  
M. J. Kaufman, Secy.-Treas.

Ky., Bond.—Bond State Bank is chartered,  
capital \$15,000. Incorporators: N. U. Bond,  
Frank Cornelius and William A. Worthing-  
ton.

Ky., Livingston.—First State Bank of Liv-  
ingston is chartered, capital \$15,000. Incor-  
porators: J. C. Griffin, W. H. Cottingham  
and W. A. Warren.

Md., Westport.—Westport Bank, capital  
\$25,000, has begun business with Carl V.  
Starkloff, Pres.; John H. Kramer, V.-P.;  
C. Walter Katencamp, Cashier.

N. C., Gastonia.—Bank of Gastonia, capi-  
tal \$50,000, is organized with M. A. Turner,  
Pres.; D. C. Ross, V.-P., and John Page,  
Cashier.

Va., Norfolk.—Southern Savings &  
Finance Co., capital \$500,000, has begun  
business with W. S. Bensten, Pres.; W.  
Ludwell Baldwin and Chester H. Prince,  
V.-P.s; H. O. Nichols, Secy., and A. C.  
Reed, Asst. Secy.

### NEW SECURITIES

Ala., Gadsden.—(Street).—Ordinance has  
been prepared providing for the issuing of  
\$41,000 of 6 per cent. 10-year \$500 denomina-  
tion bonds, dated Aug. 1, 1917. W. P. John-  
son is Mayor, and R. M. Willbanks, City Clk.

Ark., Clarendon.—(Road).—\$25,000 of bonds  
Road Dist. No. 1, Monroe County, have been  
purchased by Jas. Gould of Pine Bluff, Ark.

Ark., Harrisonburg.—(Drainage).—\$100,000  
of 5-25-year serial bonds Drainage Dist. No.  
7, Poinsett County, have been purchased by  
Jas. Gould, Pine Bluff.

Ark., Newport.—(Road).—\$65,000 of 5½  
per cent. 20-year \$500 denomination bonds Road  
Dist. No. 1, Jackson County, have been pur-  
chased by the Mississippi Valley Trust Co.,  
St. Louis, Mo.

Ark., Pine Bluff.—(School).—Bids will be  
received until July 12 for \$200,000 of bonds.  
Address School Board.

Ark., Swifton.—(School).—\$25,000 of bonds  
are being offered. Address School Board.

Fla., Dade City.—(Road).—Special Roads  
Dist. No. 4, Pasco County, has voted \$10,000  
of bonds. Address County Commrs.

Fla., Miami.—(School).—Bids will be re-  
ceived until noon July 14 for \$150,000 of 6  
per cent. bonds Miami Special Tax School  
Dist. No. 2, Dade County, dated July 1, 1917,  
and maturing July 1, 1937. R. E. Hall is  
Secy. Board of Public Instruction of Dade  
County.

Fla., Miami.—(Sewer, Hospital, Park, Etc.)  
Bids will be received until 7.30 P. M.  
July 5, for the following \$1000 denomination  
bonds: \$75,000 of 21-28-year sanitary sewer;  
\$50,000 of 16-20-year hospital; \$50,000 of 9-15-  
year municipal dock and warehouse; \$30,000  
of 9-14-year municipal railway; \$25,000 of  
21-25-year park; \$20,000 of 11-20-year ship  
channel; \$10,000 of 9-year bridge. W. B.  
Moore is City Clk. Further particulars will  
be found in the advertising columns.

Fla., St. Petersburg.—(City Improvement).  
Special dispatch to the Manufacturers  
Record says that sale of \$180,000 of 5 per  
cent. 20-year bonds is postponed indefinitely.  
Bids were to have been opened on June 15.  
G. B. Shephard is Director of Finance.

Fla., Tavares.—(School).—Bids will be re-  
ceived until 11 A. M. July 2 for \$7000 of 6  
per cent. 20-year bonds Groveland No. 36  
Special Tax School Dist., Lake County. L.  
M. Johnson is Chrmn. and Wm. T. Kennedy  
Supt. and Secy. Board of Public Instruc-  
tion.

Ga., Alma.—(Road, Courthouse, Jail).—  
\$60,000 road, \$30,000 courthouse and \$10,000  
jail 5 per cent. 10-30-year \$500 denomination  
bonds are voted; dated July 1, 1917; ma-  
turing 1927 to 1947. Date for opening bids  
will not be decided until bonds are val-  
idated by County Court, which will be  
about Aug. 1. T. B. Taylor is Judge of  
Court of Ordinary, Bacon County.

Ga., Doerun.—(School).—\$7500 of 5 per cent.



## NEWS

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30-year \$500 denomination bonds, dated Aug. 1, 1917, and maturing Aug. 1, 1947, have been voted. Date for opening bids not yet announced. Address The Mayor or H. W. Garrett, Clerk and Treas.

Ga., Griffin—(Street).—\$40,000 of an authorized issue of 4½ per cent. \$500 denomination bonds, dated May 1, 1917, and last bond maturing 1946, have been purchased at \$45, 130.35 by the Trust Co. of Georgia.

Ga., Savannah—(Water-works).—Election is to be held Aug. 14 to vote on \$500,000 of 4½ per cent. \$500 denomination 1-25-year bonds. Address The Mayor.

Ga., Smyrna—(School).—\$15,000 of 5 per cent. \$500 denomination school district bonds, dated Jan. 1, 1917, and maturing Jan. 1, 1938, are being offered at private sale. Address S. D. Rickenbarker.

Ga., St. Marys—(Bridges).—\$20,000 of Camden County bonds are voted. Address County Commrs.

Ga., West Point—(Street).—Bids will be opened Sept. 1 for \$20,000 of 5 per cent. bonds recently voted. Dated Sept. 1, 1917, and maturing Jan. 1, 1948. John T. Johnson is Mayor.

Ky., Paris—(School).—Bids will be opened July 9 for \$46,000 of 5 per cent. \$500 denomination bonds, maturing \$35,000 per year, beginning Nov., 1918. W. O. Hinton is Chrmn. Finance Committee.

La., Donaldsonville—(Road).—Bids will be received until 11 A. M. July 11 for \$30,000 of 5 per cent. 1-20-year bonds. Address Secy. Board of Supervisors of Ascension Parish.

Md., Rising Sun—(Electric-light Plant).—Bonds are reported voted. Address The Mayor.

Md., Upper Marlboro—(Sanitary Commission Bonds).—Bids will be received until noon June 26 for \$5000 of 5 per cent. 1-25-year \$200 denomination county bonds. Address Henry W. J. L. Briscoe, Clerk Board of Commrs of Prince George's County.

Miss., Fayette—(County Bonds).—Bids will be received until noon July 2 for \$12,000 of Jefferson County bonds. M. C. Harper is County Treas.

Miss., Lambert—(Sewerage, Electric Light).—Bids will be received until 8 P. M. July 3 for \$12,000 sewer and \$8000 electric-light 6 per cent. \$500 denomination serial bonds, the last of which mature July, 1937. Address The Mayor and Bd. of Aldermen. Further particulars will be found in the advertising columns.

Miss., Magnolia—(School).—Bids will be received until noon July 2 by C. E. Brumfield, Clerk Chancery Court of Pike County, for \$30,000 of not exceeding 6 per cent. 5-9-year bonds.

Miss., Meridian—(Ice Plant).—Bonds for ice plant to cost \$75,000 have been voted. John M. Dabney is Mayor and B. L. Blanks City Clerk and Treas.

Miss., Meridian—(School).—Election is to be held June 29 to vote on \$10,000 of bonds. Jno. M. Dabney is Mayor, and W. H. White, City Clerk and Treas. (Recently noted.)

Miss., Meridian—(School).—Election is to be held June 26 to vote on \$8000 of bonds Oakland Heights Separate School Dist., Lauderdale County. Address Board of Supervisors.

Miss., Meridian—(Loan Warrants).—Bd. of Suprvs. of Lauderdale County gives notice of intention to issue \$25,000 of 6 per cent. loan warrants, payable not later than Jan. 1, 1918. W. R. Pistole is Clk.

Miss., Rome—(School).—Bids will be received until July 3 by W. M. Biggs, Mayor, for \$12,000 of 5 per cent. bonds.

Miss., Tunica—(Road).—On July 2 the Board of Suprvs. of Tunica County will sell the following district road bonds: Dist. No. 1, \$70,000; Dist. No. 2, \$30,000; Dist. No. 3, \$66,000. Turner Williams is Chancery Clerk.

Mo., Caruthersville—(Levee).—Bids will be received until 7.30 P. M. July 9 by C. F.

Blocker, Secy. St. Francis Levee Dist., for \$150,000 of 5½ per cent. improvement bonds. Mo., Joplin—(Light).—\$225,000 of bonds defeated. Hugh McIndoe is Mayor.

Mo., Jefferson City—(School).—\$47,000 of bonds are voted. Address School Board.

Mo., Nevada—(Fire Truck).—\$7000 of bonds are voted. Date for opening bids not yet decided. F. A. Dulin is Mayor.

N. C., Belmont—(School).—Bids will be received until noon June 30 for \$10,000 of 5 per cent. 30-year \$100, \$500 and \$1000 denomination bonds Belmont Graded School Dist., Gaston County. Address W. B. Puett, Treas. Board of Dist. Trustees.

N. C., Belmont—(School).—Bids will be received until noon June 30 for \$20,000 of 20-year \$1000 denomination bonds, Lowell Graded School Dist., Gaston County. E. P. Hall is Clk. and Supt. Education Gaston County, Belmont.

N. C., Clinton—(Road).—Bids will be received until noon July 9 for \$25,000 of 5 per cent. \$500 denomination Sampson County bonds, dated July 1, 1917, and maturing July 1, 1937. J. T. Kennedy is Chrmn., and J. H. Packer, Secy. Board of County Commrs.

N. C., Durham—(Funding).—Special dispatch to Manufacturers Record says \$125,000 of 5 per cent. Durham County bonds have been purchased at \$750 premium by Devitt, Tremble & Co., Chicago.

N. C., Lumberton—(Refunding).—Bids will be received until noon July 10 (postponed from June 18) for \$51,000 of 27-year 5 to 5½ per cent. bonds. Ira B. Townsend is Clerk and Treas., Lumberton. N. C. Further particulars will be found in the advertising columns.

N. C., Rich Square—(School).—\$25,000 of bonds are voted. Address School Board.

N. C., Swan Quarter—(School).—Bids will be opened July 16 for \$5000 of 5, 5½ or 6 per cent. 15-year Fairfield Township High School Dist., Hyde County, bonds. E. L. Gibbs is Chrmn. County Board of Education and W. F. Credle, County Supt.

N. C., Troy—(Road).—Bids will be received until 10 A. M. June 25 by W. L. Wright, Clerk Commrs. Montgomery County, for \$30,000 of 5 per cent. bonds.

N. C., Winston-Salem—(Road).—\$50,000 of 5 per cent. \$1000 denomination Forsyth County bonds have been purchased at \$25 premium by the Wachovia Bank & Trust Co., Winston-Salem. (Recently noted.)

Okla., Ada—(Road, Bridge).—Election is to be held July 14 to vote on \$650,000 of Pontotoc County bonds. Address County Commrs.

Okla., Holdenville—(Road).—\$50,000 of Bernard Township, Hughes County, bonds defeated. (Recently noted.)

Okla., Miami—(Road).—Election is to be held July 12 to vote on \$400,000 of Ottawa County road bonds. Address County Commissioners.

Okla., Oklahoma City—(Road, Bridge, Culvert).—Bids were received until 2 P. M. June 18 for \$650,000 of bonds of Oklahoma County. I. R. Gilmore is Chrmn., and M. Garner, Clerk Board of County Commrs.

Okla., Red Rock—(Water-works).—No satisfactory bids were received June 11 for \$22,000 of 6 per cent. \$1000 denomination bonds offered on that date, and new bids are now being received. Clyde Cady is Town Clerk.

Okla., Tulsa—(Municipal Improvements).—Election is to be held June 28 to vote on \$1,000,000 of bonds for sewers, city-hall completion, fire stations, bridge, viaduct, garage, warehouse, water-pumping plant, etc. Address John H. Simmons, Mayor.

Okla., Waurika—(Water).—Bids were received until 6 P. M. June 19, for \$15,000 of bonds. Hugh Treadwell is City Clk.

S. C., Chester—(Road).—Bids will be received until noon June 25 for \$450,000 of 4½ per cent. \$1000 denomination bonds, dated

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Jan. 1, 1917, and maturing Jan. 1, 1918 to 1947, inclusive. R. S. Mebane, Robert Gage and H. S. Adams, Chester County Highway Commission.

S. C., Pickens—(Road).—Bids will be received until noon, July 30, for \$250,000 of not exceeding 5 per cent. 20-year Pickens County bonds, dated July 2, 1917. C. L. Cureton is Chrmn. Highway Commission. Further particulars will be found in the advertising columns.

S. C., Spartanburg—(Sewer).—\$40,000 of bonds are voted. J. F. Floyd is Mayor and T. J. Boyd, City Clk.

Tenn., Humboldt—(School).—\$35,000 of 5 per cent. 20-year bonds have been purchased at \$35,025 by the Hanchett Bond Co., Chicago.

Tenn., Maynardville—(Road, Bridge).—\$50,000 of 6 per cent. \$1000 denomination Union County bonds, dated June 1, 1917, and maturing June 1, 1927, have been purchased at par by Jas. E. Caldwell & Sons. Geo. N. Taylor is County Judge.

Tex., Austin.—Bonds approved by Atty. Genl.: \$10,000 Williamson County Common School Dist. No. 48; \$3000 of San Patricio County Common School Dist. No. 11; \$5000 of Taylor County Common School Dist. No. 7, and \$4000 of Dist. No. 22; \$20,000 Milam County Road Dist. No. 11; \$22,000 of Bandera County Road Dist. No. 1; \$371,000 of 5 per cent. Galveston refunding; \$200,000 of 5 per cent. Port Arthur Independent School Dist.

Tex., Belton—(School).—Districts in Bell County have voted bonds as follows: Joe Lee, \$3000; Palo Alto, \$1500. Address County Commrs.

Tex., Cleburne—(School).—\$100,000 of an authorized issue of \$250,000 of bonds have been purchased by local investors. Bids for the remaining \$150,000 will be received at any time by Emmett Brown, Supt. Public School.

Tex., Fort Worth—(School).—\$7000 of bonds Common School Dist. No. 99, Tarrant County, defeated.

Tex., Newton—(Highway).—\$100,000 of bonds Commrs.' Precinct No. 1, Newton County, defeated. Another election will be held in sixty days. W. E. Gray is County Judge.

Va., Hillsville—(Road).—Election is to be held in Carroll County Aug. 23 to vote on \$300,000 of bonds. Address County Commrs.

Va., Hampton—(Road).—Bids will be received until 11 A. M. June 27 for \$50,000 of 5 per cent. 25-year Elizabeth City County bonds. Address H. H. Holt, County Clk., Hampton. Further particulars will be found in the advertising columns.

Va., Newport News—(Street, Harbor).—No satisfactory bids were received May 28 for the \$50,000 street-improvement and \$50,000 small-boat-harbor bonds. New bids will soon be asked. M. W. Gayle is Chrmn. Finance Committee and Floyd A. Hudgins City Clerk.

W. Va., Broad Oaks—(Clarksburg).—Bids will be received until noon July 9 for \$10,000 of 6 per cent. \$500 denomination paving bonds, dated July 6, 1917. Address Joe N. Craddock, Mayor, Harrison St., Clarksburg.

W. Va., Fayetteville—(Road).—The \$100,000 of 5 per cent. Nuttall Dist., Fayette County, bonds, dated July 1, 1916, and maturing 1950, have been purchased at par and accrued interest by the State as an investment for workmen's compensation fund.

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The above property is exceptionally valuable for factory sites on account of its water frontage and railway facilities.

Either of the undersigned trustees or the auctioneers will be glad to furnish full information to any person interested, and furnish him with a plat of the property. See also plat and full advertisement in the "Daily Record," June 7, 12, 15, 19, 22, 26, 28, 1917.

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## INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

### Moist-Air Drykilns.

J. W. Reynolds of the Wier-Reynolds Lumber Co., Houston, Tex., has ordered from the L. Moore Drykiln Co. of Jacksonville, Fla., six large drykilns for the lumber company's new plant at Newton, Tex. They are 20x120 feet, of the Moore moist-air type, with a daily capacity of 120,000 feet.

### Valuable Real Estate to Be Sold

Several lots of ground in the locality known as Moale's Point, in Baltimore city, three of them having a frontage on the harbor near the new Hanover St. bridge, and all of them suitable for either manufacturing, railroad or shipping purposes, will be offered for sale at auction on June 28 at the Real Estate Board of Baltimore, according to announcement in another column. Railroad facilities immediately adjoin the property. Pattison & Gahan of Baltimore, are the auctioneers.

### Mill Property to Be Sold.

Announcement is made in another column of the sale on June 28 of the properties of the Essex Hosiery Co., Ipswich, Mass., including the manufacturing plant, twenty-three renting village realties, building lots, etc. The plant was built and equipped new in 1908, and in 1912 additions were made to it and it was brought up to date. It is complete and ready for operation immediately. The entire properties will be disposed of at public sale through J. E. Conant & Co., auctioneers, of Lowell, Mass., who will send catalogue on request.

### Sales Manager Appointed.

C. A. Newman, formerly manager of sales promotion for Henion & Hubbell, Chicago, wholesalers of power pumps, mining and mill supplies, has been made sales manager of The Boiler-Kote Company with general sales offices in the Fisher Building, Chicago. That Mr. Newman is making his acquaintance with the requirements of the mill supply trade count in his new connection is evidenced by a sixteen-page bulletin on "Steam Boilers and How to Rid Them of Scale, Pitting and Corrosion," just issued by the Boiler Kote Company. This treatise gives a clear and brief exposition of the subject—one that has become increasingly important to steam users with each new advance in wages, coal prices, and the cost of boiler replacement.

### Heating and Ventilating Installation.

The National Acme Company of Cleveland, O., has just placed an order with the Buffalo Forge Co., engineer and manufacturer, Buffalo, N. Y., for heating and ventilating by the fan system, and this installation, it is said, will be the largest of its kind under one roof. The equipment consists of four Carrier, type "A," air washers, with automatic control and fresh and return air dampers; four Niagara Conoidal supply fans, two of which deliver 100,000 cubic feet of air and two 95,000 cubic feet per minute each; four exhaust fans, two of which will handle 70,000 cubic feet of air and two 50,000 cubic feet per minute each; ten Baby Conoidal fans for toilets; 27,000 feet of Vento and four 12x14 steam engines for driving the fans. Geo. S. Rider & Co. are the consulting engineers.

### Globe Sprinklers Installed.

The 40-acre cotton warehouse of the Atlanta Warehouse Co. recently described in the Manufacturers Record is being made doubly fireproof by the installation of the fire protection system of the Globe Automatic Sprinkler Co. of Philadelphia. This is being placed in the two warehouses now under construction, in addition to recent installations in two other warehouses. These sprinkler installations safeguard the contents of the buildings, for, although the concrete structures themselves might not be appreciably damaged by fire, their contents require protection, which is afforded by the sprinklers. This is considered by the Globe Sprinkler Co. as one of its representative installations.

### Remington Oil Burning Engines

"Remington Oil Engines" is the name of a folder relating to the Semi-Diesel Valveless Oil Engines built by the Remington Oil Engine Company, Stamford, Conn. These engines are being successfully used on vessels of various types from launches to large ships, also for air compressors, electric lighting purposes, factories, ice machines, pumping stations, refrigerating plants, locomotives, general industrial service, etc. It is stated that they are simple in design, reasonable in price and ruggedly constructed, so that they stand up under the rigorous requirements of industrial work of all kinds. They are described as oil engines in the strict meaning of the words, being built solely for the use of oils as fuel; they are not gasoline engines adjusted to burn oil. A full description of the method of operation of the Remington type engine is presented, together with illustrations and detailed information.

### TRADE LITERATURE

#### Concrete Grain Bins, Etc.

"Concrete Grain Bins and Elevators," a bulletin of the Portland Cement Association, 111 West Washington St., Chicago, is issued for May 1917 and relates to such bins used by farmers, elevator companies, railroads, mills, etc. The bulletin is well illustrated and contains many important facts.

#### Oxy-Acetylene Welding, Etc.

The Prest-O-Lite Company, Inc., Indianapolis, Ind., has issued a new catalogue of the Prest-O-Lite process apparatus for oxy-acetylene welding and cutting. The apparatus listed therein covers, it is stated, the widest ranges of welding and cutting work. The book is fully illustrated. The company has seven branches in leading cities of the South, besides many others elsewhere in the country.

#### Relating to Valves, Etc.

"Valves and Fittings, Catalogue Number 6, 1917" is issued by the Edward Valve and Manufacturing Co., Chicago, and in the foreword it says "We are able to present to the discriminating engineer the utmost in quality of materials, design and reliability. Our purpose is always to build to a standard, not to a price." Besides producing the extensive line of goods described and illustrated in the 94 pages of the catalogue the company also makes to order anything else of a kindred nature and quotes prices on special requirements.

#### Important Electric Bulletins.

The Sprague Electric Works of the General Electric Co. has issued a bulletin relating to the Sprague Electric Monorail Hoists, Cage Controlled, which is a well written and printed and handsomely illustrated publication. Besides the pictures which convey much information there are tables of ratings of the different types of these machines. This bulletin is No. 48700 A and it supersedes Bulletin No. 48700. The same works has also issued a small folder concerning motor driven ventilating fans. Its main offices are at 527 to 531 West 34th St., New York City.

#### Clay-Working Machinery.

The Crossley Machine Co., Trenton, N. J., has issued a fine catalogue of its clay working machinery and kindred products in the manufacture of which it is a specialist. "We are engineers to the clay worker," says the title page and the contents of their 175 page book, which is handsomely bound in cloth amply sustain this statement. Its pages are full of illustrations and the descriptive matter accompanying them is accurate and complete. Besides being a catalogue the publication is also a work of reference because of the much valuable information of a general nature which it also contains. The company issues a number of excellent bulletins.

#### An Excellent Catalogue.

The new loose leaf catalogue of the Whitman Agricultural Co., 6903 South Broadway,



St. Louis, Mo., is ready for distribution. It contains 92 pages and embraces five separate bulletins, one of which refers to gasoline engines, another to gasoline driven pumps, one to gasoline driven equipment, including hoists, material elevators, concrete hoppers, buckets, carts, cars, builders winches, etc.; while another bulletin is devoted to gasoline sawing outfits. The fifth bulletin covers full detailed information of the various products of the company with description and price list. "Sultan" is the distinctive name of the Whitman products. On request a copy of the catalogue will be sent to anyone.

#### A Record of a Great Motor Truck Trip.

An exceedingly interesting and attractive booklet issued by the General Motors Truck Co., Pontiac, Mich., is descriptive of the double transcontinental journey made last year by a 1½-ton General Motor Co. truck, driven by William Warwick from Seattle to New York and then back to Seattle. His experiences are related entertainingly and instructively, and the snapshots taken of views along the road are abundant and pertinent. He took a different route on his return from that followed on his way to New York so that there is no repetition of either incident or picture and the narrative holds the attention of the reader from beginning to end. Copies of the booklet will be sent by the company on request.

#### Westinghouse Ventilating Service.

"Westinghouse Electrical Equipment for Ventilating Service" is the title of an unusually attractive, profusely illustrated pamphlet just issued by the Westinghouse Electric and Manufacturing Company (Motor application circular 7193). The question of ventilating equipment for various buildings is briefly described in a non-technical manner, and characteristics of both the alternating and direct-current motors for this service are given as is data on the amount of power required to drive the different types of fans and blowers. The illustrations cover a large number of buildings which have been equipped. The book will be sent on request.

The merger of the Westinghouse Machine Co. with the Westinghouse Electric Mfg. Co. has been approved by the stockholders of both corporations.

#### Concerning an Efficient Oil Engine.

Bulletin No. 166 of the De La Vergne Machine Co., whose principal office and works are located at the foot of East 138th St., New York, is devoted to describing and illustrating the oil engine type F. H., which it manufactures. "This engine," says the bulletin, "is now recognized as the one type and design that affords practically the same reliability as the ordinary steam engine and at the same time operates with unsurpassed economy on any grade of fuel or crude oil, irrespective of gravity." It is further stated that this engine is the product of 20 years experience in oil engine manufacture. Accompanying the descriptive matter are numerous fine pictures showing its general appearance and details of its construction.

#### Wright-Steel Hoists, Etc.

"Wright Hoist" is the title upon the outside cover of a new catalogue issued by the Wright Manufacturing Co. of Lisbon, Ohio, which tells all about the steel hoists, hand cranes and steel trolleys manufactured by this concern. It is Hoist Catalogue No. 8 and it is full of complete information about the various products of the plant, including tables of capacities, price lists, etc., besides admirable illustrations of the various patterns, some of which show the machines at work under different conditions. A short summary of the several types of hoists is presented to enable purchasers to choose the type best suited to their requirements. Wright hoists have been on the market for thirteen years and are made by specialists in this line of manufacture who have steadily improved them.

#### Edison Trucks With Steel-Built Batteries.

A complete description of the use of Edison storage batteries for industrial transportation is presented in Bulletin 600 of the Edison Storage Battery Co., Orange, N. J., which also includes a multitude of pertinent illustrations displaying these trucks engaged in carrying all sorts of goods, bales of cotton, bags of wool, pig iron, steel billets, cement, clay products, lumber, etc.; in fact all sorts of materials, goods in boxes at railroad stations, and steamer terminals, are seen being quickly and safely handled on these trucks. The Edison Alkaline Storage Batteries used on the trucks are built throughout of steel and have

nothing about them to break, so that they successfully withstand all the severe and frequent shocks to which they are subjected in use. There are also tractors of similar type which haul trains of loaded trailers and these are likewise described and pictured.

#### National Metal New Bulletins.

The National Metal Molding Co., of Pittsburgh, manufacturers of electrical conduits and fittings have issued Bulletins Nos. 201 and 400 descriptive of "Flexsteel" armored conductors, conduits and fittings and National Stamped Steel fixture studs. Each bulletin is bound in a separate correspondence folder, suitably indexed for filing, either according to the material or to the name of the company. The correspondence folder plan has been adopted by this company as standard and it has issued thus far Bulletins Nos. 50, 151, 201, 350 and 400 covering respectively, rigid conduits, Flex-tube non-metallic flexible conduits, "Flex-steel" products, locknuts and bushings and fixture studs. Other bulletins will be issued as rapidly as revisions can be made, these to replace the loose leaf catalogue formerly sent out.

#### Bonanza Cement Tile "Data Sheets" for Engineers and Architects.

The second edition of "Data Sheets" for the use of architects, engineers and builders, covering details in specifications for Bonanza cement tile roofing has just been published by the American Cement Tile Manufacturing Company, Oliver Building, Pittsburgh, Pa. The various details and suggestions in steel design are submitted for use with the three types or Bonanza roofing tile which the company makes. These are: Interlocking tile designed for pitched construction, forming in itself a finished watertight roof; flat tile, designed for flat or pitched construction made watertight by the application of some standard composition covering; and long span "T" tile designed for flat or pitched construction and in double thickness forming air chambers, and providing additional insulation. Full details needed by the architect and engineer are given regarding each type of tile and tables needed in making designs are given together with illustrations showing suggestions for structural steel designing and details which will prove helpful to the architect and engineer. The company's engineering department will also supply any additional details desired, and if wanted, complete purlin layouts.

#### Book Reviews.

Shop Expense Analysis and Control. By Nicholas Thiel Ficker, consulting industrial engineer and lecturer on factory engineering and cost production at New York University. Published by the Engineering Magazine Co., New York city. Cloth-bound. 240 pages. Price \$3.

The first eight chapters of this book were published in a series of articles in the Engineering Magazine and were recognized by manufacturers and accountants as a standard reference on this phase of cost-finding. These chapters have been supplemented by others now published for the first time and all combined into one book. Mr. Ficker's method of handling the subject demonstrates that some of the phases of shop expense previously given brief consideration are important and vitally affect the whole problem, and he finds that the orthodox methods of cost-finding are wrong, since in their application the management is able to shift responsibility from itself to that of the shop. Exact knowledge of the cost of manufacturing should be known by every manufacturer, but that this is far from being the case was shown by figures furnished by the Federal Trade Commission that only 10 per cent. of the manufacturing plants in the United States have adequate cost-finding methods in operation; 40 per cent. estimate their costs, and 50 per cent. have no basis whatever of knowing what these costs are. The author in presenting his book states that he does not claim to have exhausted the subject, but earnestly believes that much greater development work must be done before anything approaching universal standardization of cost-finding methods can be possible of attainment.

## DIRECTORY

### CHEMISTS GEOLOGISTS

### CHEMICAL ENGINEERS TESTING LABORATORIES

Detailed classification of specialized work undertaken by those having cards in this Directory will be found in Classified Index.

#### SAMUEL P. SADTLER & SON

Consulting and Research Chemists.

Analyses and Reports made in all Branches of Industrial Chemistry: Raw Materials and Waste Products studied and reported upon. Experimental work.

Office and Laboratory, 210 S. 13th Street; Experimental Laboratory, Chestnut Hill,

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Chemical, Cement, Lime and Fertilizer Plants Designed and Improved. Reports on Industrial Propositions. Technical Research. Analyses, Tests and Inspection of Engineering Materials.

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Designs of Industrial Plants. Modernizing, Investigations and Reports on Manufacturing and Mining Propositions. Specialists on Feldspar, Talc, Silica, Kaolin, Bauxite, and similar minerals.

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Analyses of all kinds. Waters and fertilizers specialties. Standard Cement Testing Examinations and reports on mineral properties.

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#### PITTSBURGH TESTING LABORATORY

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Specialties—Cement and Road Materials, Cast Iron Pipe, Chemical and Physical Tests.

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#### D. C. PICARD, B. Sc. M. A.

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Industrial Problems. Municipal Sanitary Work and Testing of Municipal Supplies. Analysis of Foods, Cottonseed Products, Fertilizers, Minerals, Fuel and Water—Chemical and Bacteriological.

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INSPECTION AND TESTS. Steel and Cement for Bridges and Buildings. Railroad Material and Equipment. Chemical, Physical and Cement Laboratories.

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#### WILEY & COMPANY

Analytical and Consulting Chemists

Experts on Fertilizer Materials, Coal, Greases, Foods, Drugs, Dairy Products, Chemical and Bacteriological Examination of Water for Domestic and Manufacturing Purposes.

7 S. Gay Street BALTIMORE, MD.

#### MINES EFFICIENCY CO.

Geological, Mining and Metallurgical Engineering.

Examination and Exploration of Mineral Properties. Design and Erection of Concentration Plants. Manganeses and Iron Ore Problems a Specialty.

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Design and Construction of Chemical Plants, Sulphuric Acid Plants (Multiple-tangent System), Fertilizer Plants, Extraction Plants (volatile solvents), Supervision, Investigation of Plants, Processes and Propositions.

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Research, consultation and design of plants in connection with Chemical and Hydrometallurgical processes, prevention of stream pollution, trade waste treatment, etc.

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#### GEORGE C. DAVIS

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Analyses of Iron, Steel, Ores, Alloys, Coal, Sand, Clay and Cement.

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Analytical and Consulting Chemists. Technological and Legal Experts.

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COLUMBUS, OHIO

FOUNDED 1910

#### THE INSTITUTE OF INDUSTRIAL RESEARCH

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Chemists and Industrial Bacteriologists

Feeds, Fertilizers, Fuels, Waters, Ores. Specialists in the manufacture of Alcohol.

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#### ARTHUR D. LITTLE, Inc.

ESTABLISHED 1886

The oldest, largest and best equipped organization of Chemists and Engineers in the country for the investigation of conditions affecting the efficiency and economy of industrial operations.

93 Broad Street

BOSTON

# Classified Opportunities

## MINERAL AND TIMBER LANDS WATER POWERS MISCELLANEOUS PROPERTIES

**COAL MINES.**—We are the exclusive selling agents for a combination property adapted to stock farming, to coal mining and to the manufacture of brick, located within 50 miles of Fort Worth, Texas, immediately adjoining a town on two railroads and in a developed coal-mining territory. There are two coal mines in active operation on the property with daily output of 150 to 250 tons of coal. There are 4000 acres of land, estimated to mine 3000 tons per acre. There are immense accumulations of shale ready to be worked up into brick. There are 3467 acres owned in fee, of which 1032 acres are in actual cultivation and balance in pasture. The property is highly improved; includes a general merchandise store, electric-light plant, water-works, etc. This property has earned during the past ten years, with only a very slight development, nearly \$175,000 over and above operating expenses. These earnings can be multiplied several times under aggressive and efficient management and operation. In fact, a practical man can make a big fortune from the earnings of the property during the next five or six years and, at the same time, greatly increase its selling value. Let us send you a description of the property compiled from personal inspection. Address Winters & Hill, Fort Worth, Texas.

**FOR SALE.**—Tin property: Government Expert Ferguson now looking ground over; also manganese, gold and soapstone properties. O. R. Rudisill, P. O. Box 67, Greenwood, S. C.

**FOR SALE.**—4 choice water-power sites near railway, with land at station for plants. Also mineral and timber. Address E. Carter, Lovington, Va.

**FOR SALE?** Farm, timber land, mineral property or any other? We can help you get in touch with possible purchasers by an advertisement in these columns. For rates see head of this department.

### OIL LAND

**TROPICAL OIL LANDS.**—19½ square miles, located in Central America, approximate to Atlantic tidewater. Best prospective for bringing in gusher pools rivaling the Gulf Coastal-Mexican Plain. Owned in fee. No government restrictions. Have 22,000 acres adjoining. Want to develop. Will sell 49 per cent. interest in the properties with guaranteed security to bring in oil. The British Admiralty will take the oil. Address Edward Smith, 572 Penobscot Building, Detroit, Michigan.

**LOUISIANA OIL LANDS.**—10 acres oil land in heart proven Gulf coast oil field, 600 feet from producing well. For sale or lease. 700 acres near the promising New Iberia oil field. For lease only. Exceptional opportunity. Apply to J. C. Daspt, Attorney, Baton Rouge, Louisiana.

**I HAVE FOR SALE** several good pieces of oil land near the southeast extension Healdton oil field at a bargain. Write D. S. Patterson, Ardmore, Okla.

### OIL LEASES

**FOR SALE.**—Valuable gas leases, 2000 to 10,000 acres, to suit purchaser, within 10 miles of Charleston, W. Va. A bargain if moved quick. "H," Box 219, Charleston, W. Va.

### MARL DEPOSIT

**FOR SALE.**—Fresh-water marl deposit, 96 per cent. calcium carbonate. Good railroad facilities and big demand for product. Large field for fertilizer mixing plant. Address Owner, Box 18, Abingdon, Va.

### BARYTES

**FOR SALE.**—Barytes mine fully equipped, or will sell half interest to live man capable of taking entire charge. Owner has other business requiring attention. Address P. O. Box 802, Atlanta, Ga.

### MANGANESE

**MANGANESE ORE PROPERTY.**—consisting of 200 acres, thoroughly prospected. Many bore holes prove large vein and vast quantity of ore. The property is now being worked in a crude way and the operator is making large profits. This property is close to railroad and justifies scientific development. The owner of this property authorizes us for a short while to offer it at a very low figure. P. A. Green & Co., 713 Mutual Bldg., Richmond, Va.

### COPPER

**FOR SALE OR LEASE.**—300 acres, containing copper, six miles northeast of Ducktown; has good water-power; good out-croppings; some testing done and copper found. Address A. J. Gaddis, Isabella, Tenn.

### ZINC LAND

**FOR SALE.**—240 acres proven zinc land in North Arkansas field, one mile from railroad station. \$6000 for quick sale. W. J. Robinson, Box 717, Joplin, Mo.

### COAL LANDS

**FOR SALE.**—5000 ACRES COAL LAND. Martin County, Ky., near N. & W. R. R. L. Dempsey, Inez, Ky.

## RATES AND CONDITIONS

Rate 25 cents per line per insertion. Minimum space accepted, four lines. In estimating the cost, allow seven words of ordinary length to a line. When the advertisement contains a number of long words, proper allowance should be made. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, whiskey or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year as follows: 100 lines, 23c. per line; 300 lines, 21c. per line; 500 lines or more, 20c. per line.

### COAL LANDS

**VIRGIN COAL LANDS.**  
**COAL FOR LEASE ON RENTAL.**  
**ACCESSIBLE LOCATION. ECONOMIC OPERATION AND DISTRIBUTION.**

(1) Compact body of 5500 acres of bituminous coal land, bisected by the 500-foot-deep valley of a large stream which, with its three affluents, affords easy access by drift mining to numerous level coal seams from 4 to 6 feet thick. (2) Trunk-line railroad on the property, which is 15 miles from Chattanooga, a great railroad center. (3) Different companies, now in full operation, have mined millions of tons up to and along the north and the east lines of this property. (4) 300 acres of cultivated level land along the trunk-line railroad tracks for yards and coking operations, with easy down-grade delivery thereto. (5) No incumbrances. (6) Plenty of mine timber on the property. (7) Coal is of steaming and coking quality, part identical with Govt. report upon Connellsville coal. (8) Can be leased as whole or in parts. Address Cumberland, 606 Coal Exchange, Wilkes-Barre, Pa.

### COAL LANDS AND MINES

**FOR SALE.**—By July 1, 3100 acres coal, with complete plant, now producing 800 tons per day. Output will increase steadily as development goes on. New plant, including houses, railroad and everything necessary in operating a large coal plant.

This is in Kentucky fields; carries four workable seams of very finest Kentucky coals. 200 acres owned in fee; other is perpetual leasehold. Royalty 10c. Self-drainage for 1100 acres now being worked, and for low cost of production this is an ideal plant. None of output tied up, but is for the open market. Plant will pay for itself on present market in eighteen months. You will have to see it to know what it is. Price is \$750,000, half cash, balance in six months. Wire if interested. C. O. Ramsey, Coeburn, Va.

**FOR SALE.**—Coal mine. New River district, main line C. & O. Ry. Sewell seam; capacity 150 tons daily, with 2000 acres of land.

Coal mine. Coal River district, on Coal River Div. C. & O. Ry. No. 5 block seam; capacity 250 tons daily. 1100 acres of land. Three other seams, one 5-ft. seam of by-product coal.

2000 acres undeveloped New River coal land. For particulars address No. 4004, care Manufacturers Record, Balto., Md.

**FOR SALE.**—Paying coal mine in the Arkansas anthracite coal field. 100-ton plant now in full operation. 140 acres fine coal. J. C. Harrison, Clarksville, Ark.

### COAL AND TIMBER LAND

**FOR SALE.**—4000 acres, with two seams of coking coal, on railroad, well timbered; can be developed with small capital; 45 miles from Birmingham, Alabama. Price \$30 per acre. Norman Morrison, Steiner Bank, Birmingham, Alabama.

**FOR SALE.**—2300 acres of coal land, 1000 per acre. 350 acres coal land, 475 per acre. 1300 acres timber right on New River, West Virginia, \$15,000. For detail information write L. C. Massey Realty Co., Charleston, West Virginia.

### LOANS

**LOANS** on coal and timber lands. Send complete statement if large properties, whether undeveloped lands or going concerns. Brent Altsheler, Lincoln Bank Bldg., Louisville, Ky.

### TIMBER LAND

**TIMBER LAND FOR SALE.**—I own and offer for sale 4200 acres of timber land; oak, 13,000,000 feet; gum, 2,500,000 feet, and hickory 1,500,000 feet. Four and a half miles from railroad. All high land; no overflow; rich soil. Will cut one-half million ties. Gustave Jones, Newport, Ark.

**FOR SALE.**—65,000 acres virgin long-leaf pine timber, either in fee or on a stumpage basis. Situated East Coast Florida. Price and terms reasonable. Communicate with owners, Howard Cole & Co., Inc., No. 1 Wall Street, New York, N. Y.

**WANTED TO SELL.**—23,800 acres timber lands in Orange and Ocala Counties, Fla.; R. R. on three sides of tract within three miles of it. Tract will cut fifty million feet timber (yellow pine). Will sell in fee-simple for \$230,000, or will sell the timber for \$85,000. 11,000 acres of tract under heavy, new wire fence. This tract will be taken off the market August 1 if not sooner sold. J. B. Smith Investment Company, Orlando, Florida.

### TIMBER LAND

**FLORIDA TIMBER LANDS.**  
Timber lands is the best investment procurable, now that lumber prices have soared to the utmost pinnacle. We have 55,000 acres of virgin pine timber lands that we are offering for sale at abnormally low prices in any sized tracts desired. This property is situated on railroad. Address P. O. Box 1215, Jacksonville, Fla.

**WANTED.**—Purchaser for 57,827 acres of pine timbered lands in Florida estimated by cruisers to cut 3500 feet per acre. Fee-simple deed, \$250 per acre; within 25 miles deep-water port. Owners will accept Liberty Bond for full purchase price. Address T. W. Law, Bishopville, S. C.

### TIMBER

**FOR SALE.**—EXTRA FINE RED GUM TIMBER.—SOUTH CAROLINA.—Ninety million feet; 62 million red gum, 7 million short leaf, 9 million oak, 2 million ash, 8½ million cypress, 2 million cottonwood. Very large, long-bodied, easily logged; no fine timber in the State. Price reasonable. Hickson Lumber Co., Lynchburg, Va.

**TIMBER BARGAIN.**—50,000,000 ft. original growth, 60% N. C. pine, 8% cypress, 8% poplar, balance red gum, etc., on Southern Rwy. in South Carolina. Large amount of additional, contiguous, similar stumpage can be bought cheap. For particulars write J. P. Mulherin, Augusta, Ga.

**FOR SALE.**—About three hundred and seventy-five million feet of the highest grade and quality of virgin long-leaf yellow pine. For particulars address H. H. Wefel, Jr., Mobile, Alabama.

**15 MILLION FEET** fine ship timber in Eastern Virginia; about half yellow pine, balance oak and hickory, all virgin growth. Green & Redd, Richmond, Va.

### FARM AND TIMBER LANDS

**WE OWN LARGE TRACTS OF TIMBER LANDS,** cut-over lands and colonizing lands. If interested, address H. H. Wefel, Jr., & Co., Mobile, Alabama.

### STOCK FARMS

**FOR SALE.**—Ten thousand acres especially well adapted for a ranch, located South Alabama. If buyer stocks ranch, would require no payment for three or four years. Address H. H. Wefel, Jr., Owner, Mobile, Ala.

**160 ACRES** good land in healthful section, near creek and dipping vat. R. F. D. Has house and barn and about 10 acres in cultivation. Good cattle proposition. Abundant free range; 63 miles from New Orleans. No overflow. Price \$4.75 per acre. E. P. Oates, Box 55, Carriere, Miss.

**ROSELAND PARK.**—The best improved breeding farm in Southeastern Kansas; 173 acres up against a railroad village; 113 miles south of Kansas City. Write for information. Thos. D. Hubbard, owner, Kimball, Kan.

**315-ACRE STOCK FARM,** 3 miles from Demopolis. Good improvements. One year's crops will repay purchase price. \$20 per acre. See us for small or large farms. Alfalfa land a specialty. Berry-Snellings Realty Co., Demopolis, Ala.

### FARM AND GRAZING LANDS

**WE HAVE FOR SALE** 323 farms in Piedmont Virginia and Northern Maryland, ranging in price from \$1000 to \$100,000, many of which are in a high state of cultivation, for general farming, grazing, orcharding and dairying. W. W. Briggs & Son, Orange, Va.

### COUNTRY HOME

**FOR SALE OR EXCHANGE.**  
Magnificent modern country home, 10 acres, 15 rooms, gas, electricity, sewerage, fine water supply, 3 bathrooms, hot-water heat, servants' quarters, individual phones, garage, stable, barn, chicken-houses, in first-class condition. Garden, asparagus, strawberry beds, young orchard, all fruits, flower beds, beautiful shade. Overlooking Washington, 30 minutes U. S. Treasury by electric cars, 15 minutes auto, 10 minutes steam road. Price \$30,000; terms if desired. O. B. Zantinger, Washington, D. C.

### SUBURBAN PROPERTY

**ACREAGE FOR SALE.**—Charleston, W. Va. Home of the U. S. Government \$20,000,000 armor-plate plant. We have 40 acres adjoining the city limits for sale. We will take \$500 an acre. Easy terms. The Rosenbaum Real Estate Co., P. O. Box 83, Cumberland, Md.

## FRUIT, FARM AND TRUCK LANDS

THESE COLUMNS ARE CLOSELY READ BY PEOPLE for information of all kinds about Southern properties of every description. If you have a property of any kind that you want to dispose of, try an advertisement in these columns. Others have to their advantage. For rates see head of department.

### FLORIDA

#### FOR SALE

6560 ACRES IN FLORIDA.

WHOLESALE PRICE.  
WILL NOT RETAIL.

Located on the East Coast, in Volusia county; price \$6.50 per acre; \$1 per acre down, balance \$1 per acre per year, 6 per cent. interest on deferred payments; 8 miles west of New Smyrna, Fla.; on the Orange City branch of the Florida East Coast R. R.; Indian Springs Station is only ¼ of a mile from it; 2550 acres are "prairie land." Has an elevation of about 22½ to 41 feet above the tidewater; top soil is a black sandy loam, underlaid with clay. Would make an ideal stock range. There are forty families farming in the adjoining sections; some have raised 45 to 50 bushels of corn to the acre, 50 barrels of Irish potatoes, and all kinds of garden truck, such as lettuce, beans, peas, Bermuda onions, besides good crops of rice, oats and grasses for feed. Title good. Owned in fee-simple, without incumbrance. Other information will be furnished upon request by E. C. Howe, 747 Hartford Bldg., Chicago, Ill.

**FOR SALE.**—12,000 acres in famous St. Johns County, Florida, potato district; well located, at very attractive price. Address P. F. Quinn, Vinton, Iowa.

**FOR A SAFE** and permanent investment, Florida lands and values should interest you. Manatee County is the best location, and is destined to become one of the most progressive settlements in the State and a very profitable investment. Florida farms in Manatee County are below frost belt; have rich soil, with 365 producing days. Easy terms. J. Henry Strohmeier, Maryland Casualty Tower Building, Baltimore, Md., and Sarasota, Florida.

**FOR SALE.**—20 acres choice land near Live Oak. \$16 per acre. Address H. D. Smith, Williamston, W. Va.

**FREE.** "THE WINTER GARDEN OF AMERICA." to Fruit Growers, Truckers, General Farmers, Cattle, Hog and Poultry Raisers. Folks interested in the great Indian River Section of Florida, write Indian River Farms Company, Suite O, 609 Putnam Bldg., Davenport, Iowa.

### GEORGIA

**FOR SALE.**—A farm of 4130 acres in high state of cultivation, 87 miles west of Savannah, Ga., on Central Railroad; seven miles from county-seat; turnpike road runs both north and south and east and west through farm.

Plenty tenant-houses, and wood and timber for upkeep of place. Bearing pecan grove, ten acres; Bermuda pasture, 100 acres. Two-story eight-room house, set in oak grove, for owner. One-story four-room house for superintendent. Artesian well flows ten ft.; a small creek on west boundary, from which power can be developed to run electric plant.

System cotton gin, grist mill, bean mill, storehouse, a railroad station and postoffice on place.

For quick sale will take thirty dollars (\$30) per acre and give possession when I get this crop off, not later than December 1.

Would consider exchange office building or apartment-house, well located, some good city. E. P. Daniel, Rogers, Ga.

### LOUISIANA

**LOUISIANA** in the "SUNNY SOUTH." No extremes of heat or cold. Lands cheap. Opportunity beckons. Write Farm Lands Department Steere Home Construction Co., Shreveport, Louisiana.

### MARYLAND

**FOR SALE.**—Water-front farm containing 127 acres; one-half in timber and one-half in cultivation. Improved by colonial brick house in excellent condition. Sandy shore, fine for bathing; near Salisbury. For quick sale it can be bought for \$5000; easy terms. For full particulars address S. P. Woodcock & Co., Salisbury, Maryland.

### MICHIGAN

**GRAND TRAVERSE BAY.**—Have the finest summer resort lands, fruit farms and big acreage in Grand Traverse County. On the West Michigan-Dixie Highway. Henry Ford has bought in this section for a beautiful summer home and game reserve. Why not you? Property fast taking up by wealthy Pennsylvanians and Southerners. For this, address Edward Smith, 572 Penobscot Bldg., Detroit, Michigan.



# Classified Opportunities

## FRUIT, FARM AND TRUCK LANDS

### TEXAS

800 ACRES, 18 miles south of San Antonio; all under fence; sandy soil; fine well of water; pump; a dandy combination stock and farm proposition. Only an hour's drive. Good auto road all the way. Going at \$15 per acre; part cash, balance easy terms. Leconte Realty Co. (owners), Box 100, San Antonio, Tex.

FOR SALE—476 acres of farming land in Jefferson County, located on the improved highway between Houston and Beaumont. About 300 acres of rice land, balance suitable for highland crops, well improved, and will be sold on easy terms. For price and terms apply to Guy W. Junker, Beaumont, Tex.

FOR SALE—4756-acre ranch in Zavala County; three Eclipse mills; 80 per cent. tillable, different soils. Half cash and terms. Price \$15 per acre; adjoining lands higher. W. R. Hesskew, Eagle Pass, Texas.

### VIRGINIA

#### SHELANDOAH VALLEY

#### OF VIRGINIA.

Where Blue Grass and Alfalfa Grow.

In the heart

of the Apple Belt.

Delightful climate.

Fertile Soil.

Write John M. Londeree,

Staunton, Va.

VIRGINIA MODERN COUNTRY HOME in Piedmont section; 165 acres. \$15,000. Actual cost \$20,000. Must sell quick. May consider part trade in city property. Address No. 4066, care Manufacturers Record.

2000 ACRES of fine tobacco and grain land, on improved highway, in Lunenburg Co., Va. Railway runs through this property, with siding on this property. E. M. Terry (owner), South Boston, Va.

## TIMBER FACTORS AND ESTIMATORS

### TIMBER FACTORS AND ESTIMATORS.

SANBORN & GERHART.

International Timber Lands Investigation

a Specialty.

American Natl. Bank Bldg., Asheville, N. C.

## INCORPORATING COMPANIES

### DELAWARE CHARTERS.

Stock Without Par Value.

Directors Need Not Be Stockholders.

Other important amendments (March 20, 1917).

Write for new DIGEST (4th ed.).

CORPORATION COMPANY OF DELAWARE

Equitable Building, Wilmington, Delaware.

## ATTORNEYS

### RAYMOND M. HUDSON,

Attorney.

Practice before U. S. Supreme Court, U. S.

Court of Claims, D. C. Court of Appeals,

D. C. Supreme Court, Va. and Md. Courts,

Executive Departments, Congressional Com-

mittees, Federal Reserve Board, Federal

Trade Commission, Interstate Commerce

Commission. Cable "Rayhud."

## BUSINESS OPPORTUNITIES

WANTED CAPITAL.—Alabama Lime Products Company wants to borrow twelve thousand dollars with which to increase capacity now demanded. Secured by mortgage on the plant. Only lime products plant in North Alabama. It is in perfect order, new and worth thirty thousand dollars. Fronts on the Southern Railway. Ample switch and railroad arrangements and connections. Security ample, and every respect sure and safe. Highest references. Address Alabama Lime Products Company, Box A, Paint Rock, Ala.

STORE BUILDING on main street of town for sale. Store is of brick construction, 100 feet square, with a basement the same size, and a vacant lot on the rear of one-half of it 50x100 feet. This store is about 10 years old and in first-class condition. A wall separates the building, making the rooms 50x100 feet. For further information address Guntersville Hardware Co., Guntersville, Ala.

FOR SALE—A bleachery and absorbent cotton manufactory, offered on account of lack of capital. This is a splendid paying proposition and offered at a low price for quick sale. On account of war conditions, good demand for product. Address 3092, care Manufacturers Record, Balto., Md.

TO LOVERS OF DUCK SHOOTING. Splendid clubhouse and grounds, and all equipment, boats, etc., ready for hunting on Back Bay, Virginia. Ex-President's favorite hunting grounds. Price for the outfit \$4000. For full particulars address Powell Trust Co., Real Estate Agents, Newport News, Va.

## BUSINESS OPPORTUNITIES

FOR SALE—To settle an estate, well established retail lumber business in large town in South Carolina. Has made good profits and will show them to interested party. Has machinery for manufacturing sash, doors, blinds and millwork. No competition. A good proposition. Address No. 4002, care Manufacturers Record, Balto., Md.

WANTED—To exchange high-class apartment-house in New York with annual rentals over \$30,000 for unencumbered agricultural or timber lands in South, preferably Florida. Address, giving full particulars, P. O. Box 299, Clearwater, Fla.

WANTED—Partner with from six to eight thousand to invest with like amount in a lucrative manufacturing business. For particulars address Box 304, Anniston, Ala.

DOUBLE BAND MILL in North Carolina. Up-to-date equipment. Ample standing timber behind it. Making money. Good reason for selling. Green & Redd, Richmond, Va.

WANTED—State operators. We have several quarries to lease on our 5000 acres. Will contract to take the output. The Southern Slate Co., Wildham, East Tennessee.

## TO FAR-SIGHTED MANUFACTURERS AND JOBBERS.

Next to New York City, Norfolk, Virginia, is probably the most advantageously located city in the United States for the storage and distribution of all classes of goods.

Firms and corporations securing their own warehouses for storage purposes in Norfolk, Virginia, without delay—thus enabling them to carry at said point reserve stocks—will certainly be in a very strong position to meet the unprecedented demand that will surely develop throughout the great Hampton Roads section (especially during the war period) for general supplies.

The undersigned invites correspondence regarding three of the very best storage warehouse sites, with superior transportation facilities obtainable, in Norfolk, Virginia. Areas, respectively, 33,000, 170,000 and 136,000 square feet.

These properties may, just at this time, be acquired at prices that will insure minimum storage rates. For particulars address "Owner," P. O. Box 722, Norfolk, Va.

MAN with executive ability can purchase control of an old-established mercantile corporation on excellent paying basis with net assets of over \$50,000. Highly rated, well located, and closest investigation invited. Only about \$15,000 cash required. Unusual opportunity. P. O. Box 152, Richmond, Va.

## BOXES AND CASES

WE ARE prepared to enter into contract with responsible parties to supply them on future delivery orders for pine or oak boxes. K. D. or completed in car lots or less. If special, send sample case and state best price willing to pay f. o. b. cars Milledgeville, Ga. Fowler Mfg. Co., Milledgeville, Ga.

## BUILDINGS—STEEL PORTABLE

"PRUDENTIAL" STEEL BUILDINGS for all purposes; portable one-story construction; workshops, toolhouses, storage, garages, bunkhouses, etc. Write for Catalog A. C. D. Pruden Company, Baltimore, Md.

## PATENT ATTORNEYS

Patents secured or fee returned. Actual search and report free. Send sketch or model. 1917 Edition, 90-page patent book free. Personal and prompt service. My patent sales service gives full value for my clients. George P. Kimmel, 288 Barrister Bldg., Washington, D. C.

PATENTS.—Write for how to obtain a patent, list of patent buyers, and inventions wanted. \$1,000,000 in prizes offered for inventions. Send sketch for free opinion as to patentability. Our four books sent free upon request. Patents advertised free. We assist inventors to sell their inventions. Victor J. Evans Co., Patent Attorneys, 712 Ninth St., Washington, D. C.

HIGH-VALUE PATENTS Patents that fully protect. Patents that Pay Largest Financial Returns are the kind we obtain. References: SUCCESSFUL Inventors and WELL-KNOWN Manufacturers. Send 8 cents for new book of extraordinary interest and value to inventors. R. S. & A. B. Lacey, 93 Barrister Building, Washington, D. C. Established 1869.

EUGENE C. BROWN, ENGINEER AND PATENT LAWYER, 734 Eighth St. N. W., Washington, D. C. Graduate Engineer, Lehigh University; Member Bar U. S. Supreme Court; Former Examiner U. S. Patent Office. PATENTS AND TRADEMARKS. Inventions considered from engineering and legal standpoint. Infringements and extent of patent monopoly investigated for manufacturers. Glad to answer any inquiries.

## PATENT ATTORNEYS

INVENTIONS—PATENTING AND PROMOTING.—A book containing practical advice and directions for inventors and manufacturers. Book, suggestions and advice free. Lancaster & Allwine, Registered Attorneys, 265 Ouray Bldg., Washington, D. C.

PATENTS—TRADE-MARKS.—Highest professional service. I personally examine the Patent Office records in regard to and personally prepare and prosecute every application filed through my office. Highest references. Booklet, "The Truth About Patents," and honest advice free. J. R. Kelly, Patent Attorney, 750 Woodward Bldg., Washington, D. C.

PATENTS THAT PROTECT AND PAY. Advice and books free. Highest references. Best results. Promptness assured. Trade-Marks registered. Watson E. Coleman, Patent Lawyer, 624 F St., Washington, D. C.

POSTAL will bring free booklet telling all about patents and their cost. Shepherd & Campbell, Patent and Trade-Mark Attorneys, 732 8th St., Washington, D. C.

PATENT YOUR IDEAS.—\$3000 offered for certain inventions; book, "How to Obtain a Patent," and "What to Invent," sent free upon request; send rough sketch for free report as to patentability. We advertise your patent for sale at our expense. Chandler & Chandler, Patent Attorneys, 978 F St., Washington, D. C.

PATENTS AND TRADEMARKS Procured by a former Examining Official of the U. S. Patent Office. NORMAN T. WHITAKER, Attorney-at-Law, Mechanical Engineer, 31 Legal Bldg., Washington, D. C. (Opposite Patent Office.) Inquiries Invited.

## INDUSTRIES WANTED

### FLOUR AND CORN MILL

WANTED—FLOUR AND CORN MILL for the town of Crewe. Parties interested write Chamber of Commerce, Crewe, Va.

## SHIPBUILDING SITES

### SHIPBUILDING SITES.

FERNANDINA, FLORIDA.

We invite prospective shipbuilders to investigate opportunities offered here. Chamber of Commerce, Fernandina, Fla.

### SHIPBUILDING SITE

AT SOUTH ATLANTIC PORT.

Any shipbuilder contemplating the building of wooden ships will do well to investigate this site, which is situated near the source of supply of oak and pine timber, and is near the mouth of one of the largest rivers on the South Atlantic Coast, twelve miles from the sea. There is a 15,000-capacity sawmill now on the property. No shipbuilding plant here at present. Postoffice Box 68, Darien, Ga.

## FACTORY SITES

BALTIMORE FACTORY AND TERMINAL SITES.—Statement of Asa G. Candler, President The Coca-Cola Co.: "Investigation convinced us that Baltimore is not only the commercial metropolis for Southern trade, but that it affords shipping opportunities both by water and rail for domestic and foreign traffic superior to any of the great cities in any section of the United States." Locate in Baltimore and derive these advantages. We can provide accommodations to meet your requirements.

"OUR MOTTO": FACTORY AND TERMINAL SITES IN BALTIMORE. Wm. Martien & Co., Ninth Floor, Lexington St. Bldg., Balto., Md.

## INDUSTRIAL PLANTS FOR SALE

### PRINTING PLANT

FOR SALE.—In part or as a whole, a well established, modern printing plant (incorporated). Price right and easy terms if desired. P. O. Box 74, Chattanooga, Tenn.

### FLOUR MILL, GIST MILL AND GINNERY

VALUABLE property for sale at Sandersville, Ga. One flour mill, gist mill and ginnery complete, all run by one engine; located in best grain and cotton section in Georgia. Will sell cheap and allow liberal terms. Jas. E. Johnson, Cashier.

### GAS PLANT

GAS PLANT FOR SALE.—One producer gas plant complete, 100 H. P., Rathburn-Jones engine, Smith producer. Also 100 H. P. distillate and 150 H. P. distillate engines. Immediate delivery. A. H. Cox & Co., Inc., 309 First Ave., Seattle, Wash.

## EMPLOYMENT AGENCIES

WE FURNISH laborers, any amount, to industries. Also high-grade technical, executive and clerical help. Orders are filled promptly. We also supply hotel help. Write or wire us. 20th Century Employment Agency, 642 6th Ave., New York City.

## MEN WANTED

IF ACTUALLY QUALIFIED for salary between \$2500 and \$3500, communicate with undersigned, who will negotiate strictly confidential preliminaries for such positions; executive, administrative, technical, professional; all lines. Not an employment agency; undersigned acts in direct confidential capacity, not jeopardizing present connections. Established 1910. Send name and address only for explanatory details. R. W. Bixby, El Niagara Square, Buffalo, N. Y.

WANTED—Men to build paying business of their own on guaranteed boiler preservative. Fireman or engineer could start spare time; salesman, as a side line. Give age, experience, references; confidential. Address Room 1419 Fisher Bldg., Chicago, Ill.

MANUFACTURERS' AGENTS wanted for "Flex" belt preservative. Commission 80c, a gal.; samples. Write Improved Surface Co., North Tonawanda, N. Y.

## SITUATIONS WANTED

OFFICE MANAGER, credit man and executive desires position. College and law training, with experience prominent corporations. Married; age 40; habits and health good; substantial recommendations. No. 4005, care Manufacturers Record, Balto., Md.

ENGINEER for architect's office desires position. Have designed and supervised structural and mechanical work on over \$2,000,000 of buildings in last two years. Best references from present employers. C. C. Robinson, Times-Dispatch Bldg., Richmond, Va.

RAILWAY supplies and material. Competent and reliable salesman desires connection with manufacturer or dealer. Either export or domestic trade. Address No. 4008, care Manufacturers Record, Balto., Md.

WIDE-AWAKE young railroad man in close personal touch with Eastern manufacturers would like to change to mercantile field where aggressive initiative is recognized. Can invest small sum. Answers strictly confidential. Address No. 4009, care Manufacturers Record, Balto., Md.

## OFFICE EQUIPMENT

### BARGAINS.

Adding machines, calculating machines, duplicating machines, rotary mimeographs, addressing machines, check writers, envelope sealers, etc. All makes, new, used and rebuilt. Every machine guaranteed in perfect mechanical order. Collins & Co., 1324 Arch St., Philadelphia, Pa.

## MACHINERY AND SUPPLIES

FOR SALE—Knife grinder, band saw, disc sander, sand drum. Oettinger Lumber Co., Greensboro, N. C.

FOR SALE—Second-hand sawmill engine boiler. Will give bargain. A. D. Jones, Barkers Creek, N. C.

### CORLISS ENGINE

FOR SALE—One 22x48 Cooper Corliss engine, cylinder rebored, new head, rings and rod, valves rebored, thoroughly overhauled; A-1 condition, guaranteed. A bargain. By Mecklenburg Iron Works, Charlotte, N. C.

### CRUSHER, BOILER AND ENGINE

FOR SALE—One No. 5 Champion rock crusher, in good condition. One portable 35 H. P. boiler and 30 H. P. engine, in good condition. Will sell at bargain. Johnston, Porter & Peck, Greenville, N. C.

### KEG STAVE MILL OUTFIT

FOR SALE—Keg stave mill outfit complete, in good condition, Camp Manufacturing Company, Franklin, Va.

## MACHINERY and SUPPLIES WANTED

### MILLING EQUIPMENT

WANTED—Prices on second-hand six or eight-foot Hardinge mill and cypress tank twenty-two feet in diameter, also the smaller machines necessary for installation of 100-ton flotation unit. Address Mill, Box 374, Salisbury, N. C.

# PROPOSALS

BOND ISSUES BUILDINGS PAVING GOOD ROADS

More Southern Proposal Advertising Is Printed In The Manufacturers Record Than In Any Other Paper

Bids close July 6, 1917.

**PROPOSALS FOR ELEVATORS, GALVANIZED Steel, Checkered Steel Plates, Barbed Wire, Nuts, Steel Drums, Garbage Cans, Hinges, Taps, Files, Planes, Rakes, Mattocks, Vises, Engine Lubricators, Grease Cups, Drawer Locks, Padlocks, Journal Jacks, Life Preservers, Kitchen Work Tables, Water Coolers, Coffee Pots, Stock Pots, Tablespoons, Dividers, Rulers, Waiters' Aprons, Paper Napkins, Paper Towels, Tracing Cloth and Paper, Bristol Board, Pencils, Ferro-silicon, and Mixing Varnish.** Sealed proposals will be received at the office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10.30 A. M. July 6, 1917, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and information relating to this Circular (No. 1150) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; Audubon Building, New Orleans, La., and Fort Mason, San Francisco, Cal.; also from the United States Engineer Offices in the principal cities throughout the United States. **EARL I. BROWN, Major, Corps of Engineers, U. S. A., General Purchasing Officer.**

Bids close July 5, 1917.

**TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., June 11, 1917.** Sealed proposals will be opened in this office at 3 P. M. July 5, 1917, for new heating boilers, etc., in the United States postoffice and courthouse at Topeka, Kans., in accordance with drawings and specifications, copies of which may be had at this office or at the office of the custodian, Topeka, Kans., in the discretion of the Supervising Architect. **JAS. A. WETMORE, Acting Supervising Architect.**

Bids close July 6, 1917.

**TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., June 8, 1917.** Sealed proposals will be opened in this office at 3 P. M. July 6, 1917, for an underground lawn sprinkler system for the United States postoffice and courthouse, Charlotte, N. C., in accordance with specifications and drawings, copies of which may be had at this office or at the office of the custodian, Charlotte, N. C., in the discretion of the Supervising Architect. **JAS. A. WETMORE, Acting Supervising Architect.**

Bids close July 6, 1917.

**TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., June 11, 1917.** Sealed proposals will be opened in this office at 3 P. M. July 6, 1917, for repairs to heating apparatus, elevators, etc., in the United States postoffice and courthouse at Atlanta, Ga., in accordance with specifications, copies of which may be had at this office or at the office of the custodian, Atlanta, Ga., in the discretion of the Supervising Architect. **JAS. A. WETMORE, Acting Supervising Architect.**

Bids close July 26, 1917.

**TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., June 14, 1917.** Sealed proposals will be opened in this office at 3 P. M. July 26, 1917, for the construction of the United States postoffice at Gallatin, Tenn. Drawings and specifications may be obtained from the custodian of the site at Gallatin, Tenn., or at this office, in the discretion of the Supervising Architect. **JAS. A. WETMORE, Acting Supervising Architect.**

Bids close July 6, 1917.

**TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., June 6, 1917.** Sealed proposals will be opened in this office at 3 P. M. July 6, 1917, for a new boiler, etc., in the United States postoffice at Columbia, Mo., in accordance with drawings and specifications, copies of which may be had at this office or at the office of the custodian, Columbia, Mo., in the discretion of the Supervising Architect. **JAS. A. WETMORE, Acting Supervising Architect.**

Bids close July 27, 1917.

**TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., June 15, 1917.** Sealed proposals will be opened in this office at 3 P. M. July 27, 1917, for the construction complete of the United States postoffice at Vernon, Tex. Drawings and specifications may be obtained from the custodian of site at Vernon, Tex., or at this office, in the discretion of the Supervising Architect. **JAS. A. WETMORE, Acting Supervising Architect.**

Bids close July 9, 1917.

**TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., June 18, 1917.** Sealed proposals will be opened in this office at 3 P. M. July 9, 1917, for a new heating system, repairs to plumbing, etc., United States Courthouse and Postoffice at Statesville, N. C., in accordance with the drawings and specifications, copies of which may be had at this office or at the office of the Custodian, Statesville, N. C., in the discretion of the Supervising Architect. **JAS. A. WETMORE, Acting Supervising Architect.**

## PROPOSAL ADVERTISING INFORMATION

**RATE:** 25 cents per line per insertion.

**PUBLICATION DAY:** Thursday.

**FORMS CLOSE 9 A. M. Wednesday.** Copy received later cannot be published until issue of following week.

**NIGHT LETTER:** When too late to send copy by mail to reach us by 9 A. M. Wednesday, forward by night letter.

**THE DAILY BULLETIN OF THE MANUFACTURERS RECORD:**

Published every business day; gives information about the industrial, commercial and financial activities of the South and Southwest.

The Daily Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened, or when daily publications are necessary to meet legal requirements.

The same rate applies—25 cents per line per insertion.

Bids close July 5, 1917.

**TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., June 11, 1917.** Sealed proposals will be opened in this office at 3 P. M. July 5, 1917, for mechanical stokers, etc., in the United States custom-house and postoffice at Cincinnati, Ohio, in accordance with specification, copies of which may be had at this office or at the office of the custodian, Cincinnati, Ohio, in the discretion of the Supervising Architect. **JAS. A. WETMORE, Acting Supervising Architect.**

Bids close July 5, 1917.

## \$260,000 5% Bonds

Miami, Fla.

Sealed bids will be received by the City Council, in care of the undersigned, until 7.30 P. M. July 5, 1917, for the purchase of all or any part of the above bonds, dated January 1, 1917, principal and semi-annual interest payable in gold in New York. Denomination \$1000. Coupon bonds registrable as to principal. Purposes and maturities as follows:

\$75,000 for sanitary sewers, maturing \$10,000 annually 21 and 22 years; \$50,000 annually 23, 24 and 25 years; \$15,000 annually 26 and 27 years; \$10,000 28 years.  
\$50,000 for a hospital, maturing \$10,000 annually 16 to 20 years, inclusive.  
\$50,000 for municipal docks and warehouses, maturing \$5,000 annually 9 to 12 years, inclusive; \$10,000 annually 13 to 15 years, inclusive.  
\$30,000 for municipal railway connecting municipal docks with F. E. C. Ry., maturing \$5,000 annually 9 to 14 years, inclusive.  
\$25,000 for purchasing parks and park sites, maturing \$5,000 annually 21 to 25 years, inclusive.  
\$20,000 for a ship channel and turning basin in Biscayne Bay, maturing \$2,000 annually 11 to 20 years, inclusive.  
\$5,000 for a bridge over the Miami River at 12th Street, maturing 9 years.  
\$5,000 for a bridge over the Miami River at Avenue D, maturing 9 years.

By authority of law and a resolution of the City Council, a general tax levy, without limit, has been provided for the payment of the principal and interest of all of the above bonds, which are general city obligations.

A certified check on a solvent bank or trust company, payable to the order of the City Treasurer, for 2 per cent. of the par value of the bonds bid for must accompany each bid.

The bonds will be prepared under the supervision of the United States Mortgage & Trust Company, which will certify as to the genuineness of the signatures of the city officials and the seal impressed thereon. The purchaser or purchasers will be furnished, without charge, the approving opinion of Messrs. Caldwell & Masslich.

All proposals must be for at least 97 cents on the dollar and accrued interest, and must be made upon a printed form which will be furnished by the undersigned or said trust company, and must be enclosed in sealed envelopes, marked "Bids for Bonds." Bonds must be delivered at the office of the United States Mortgage & Trust Company, 55 Cedar Street, New York, on July 11, 1917, at 11 o'clock A. M., unless another time and place shall be mutually agreed upon. No other bonds of the City of Miami will be sold before October 1, 1917. The right is reserved to reject any or all bids.

Miami, Florida, June 12, 1917.

W. B. MOORE, City Clerk.

## \$20,000 6% Bonds

**FOR SALE—NORTH CAROLINA DRAINAGE BONDS.**

New Hanover County Drainage District No. 3 offers \$20,000 drainage bonds. Mature \$2,000 annually, beginning three years from date of issue. Interest 6 per cent., payable semi-annually. Valuable and highly developed lands in said district. Send bids or other communications to

W. E. PRICE, Chairman, Wilmington, N. C.

Bids close July 9, 1917.

## \$175,000 5% Bonds

Notice is hereby given that on Monday, July 9, 1917, at the Courthouse door in Madisonville, Tennessee, there will be offered for sale, for cash in hand, the following bonds, to wit:

\$175,000 Monroe County Road Improvement Bonds, bearing interest at the rate of 5% (five per centum), interest payable semi-annually on the 8th day of July and the 8th day of January of each year, and the place of payment of principal and interest will be arranged to suit the convenience of the purchaser. Said bonds will mature as follows:

\$58,000 July 8, 1941.

\$58,000 July 8, 1946.

\$59,000 July 8, 1951.

Said bonds have been heretofore sold to the firm of Stacy & Braun of Toledo, Ohio, and they having failed to comply with the terms of their bid, the bonds will be resold at their risk and expense.

Sealed bids will be received and opened on July 9, 1917, and if not satisfactory the officers directing the sale of said bonds will place same up for sale at public auction, where they will be sold to the highest and best bidder for cash in hand. The officers directing the sale reserve the right to reject any and all bids.

Each bid shall be accompanied by a certified check for 1 per centum of the amount of the bid.

Further information can be obtained by writing Joe J. Howard, Chairman, Madisonville, Tennessee, or Jno. B. Pennington, Clerk, Madisonville, Tennessee.

This June 8, 1917.

JOE J. HOWARD,  
Chairman Monroe County Court.  
JNO. B. PENNINGTON,  
County Court Clerk, Monroe County, Tenn.

Bids close June 30, 1917.

## \$60,000 6% Bonds

The undersigned, Treasurer of the Limestone Drainage District, will receive sealed proposals for \$60,000 worth of bonds for the Limestone Drainage District at the office of Treadwell & Treadwell at Arcadia, in De Soto County, Florida, up to 11 o'clock on June 30, 1917, said bonds to be dated July 1, 1917, in denominations of \$500 each, and drawing 6 per cent. interest from date, payable semi-annually and maturing as follows:

\$100 two years from date; \$1500 three years from date; \$2000 four years from date; \$2500 annually for 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 and 15 years from date, and \$3000 annually 16, 17, 18, 19, 20, 21, 22, 23 and 24 years from date, and \$1000 25 years from date, said bonds to be sold to the highest and best bidder for cash.

All proposals must be accompanied by a certified check in the sum of \$1000 to insure the faithful carrying out of the successful bid. All checks to be immediately returned to unsuccessful bidders.

The right is reserved to reject all bids.  
R. O. TURNER,  
Treasurer of the Limestone Drainage District.

Bids close June 26, 1917.

## \$195,000 5% Bonds

Sealed bids will be received by the undersigned until 12 o'clock noon June 26, 1917, for \$195,000 5 per cent. "General Improvement and Paving Bonds."

Said bonds to be dated January 1, 1917, in denominations of \$500, bearing interest from date at the rate of 5 per cent. per annum, payable annually on January 1 of each year, and shall be payable to bearer at the office of the Treasurer of the City of Martinsburg, thirty-four years after date, and redeemable at any time after twenty years.

Bids must be accompanied by a certified check payable to the City of Martinsburg, W. Va. for 5 per cent. of the amount of each bid submitted. No bids will be accepted for less than par and accrued interest. The right to reject any and all bids is reserved by the Commissioners.

JNO. T. NADENBOUSCH, Secretary,  
Commissioners of the City of Martinsburg.

Bids close July 30, 1917.

## \$250,000 Road Bonds

By virtue of the authority of an Act of the General Assembly of the State of South Carolina, approved by the Governor on the 1st day of March, 1917, for the purpose of road improvement, we hereby offer for sale Two Hundred and Fifty Thousand (\$250,000) Dollars of coupon bonds of Pickens County, said State, to mature twenty years after date and bearing interest from date at not exceeding 5 per cent. per annum, to be paid semi-annually at such place as may be agreed upon.

Bonds to be dated 2d day of July, 1917. Right reserved to reject any and all bids. Bids will be received up to noon July 30, 1917.

Bidders required to deposit certified check of \$5000 as an act of good faith. The County has no bonded or outstanding indebtedness.

C. L. CURETON, Chairman,  
Pickens, S. C.;  
R. F. LENHARDT,  
Easley, S. C.;  
J. F. BANISTER,  
Liberty, S. C.,  
Highway Commission  
Pickens County, S. C.

Bids close July 10, 1917.

## \$35,000 5% Bonds

Sealed bids will be received by the Board of Commissioners of the City of Talladega, Alabama, until 2 o'clock P. M. on July 10, 1917, for the purchase of \$35,000 5 per cent. 30-year Water-works gold bonds, bonds dated July 1, 1917. Interest payable semi-annually National Park Bank, New York. Each bid must be accompanied by a certified check in the sum of \$500, payable to the said Board of Commissioners.

The right is reserved to reject any or all bids.

A. G. WELDON,  
City Clerk and Tax Collector.

Bids close July 3, 1917.

## \$20,000 6% Bonds

Notice is hereby given that the Mayor and Board of Aldermen of the Town of Lambert, Mississippi, will offer for sale \$12,000 worth of Sewerage Bonds of said town and \$8,000 worth of Electric Light Bonds of said town at 8 o'clock P. M. July 3, 1917, said bonds in denominations of \$500 and bearing 6 per cent. interest, due and payable semi-annually. Said bonds are serial bonds, the last of which mature July, 1937.

The Board reserves the right to reject any and all bids.

Bids close July 10, 1917.

## \$51,000 Refunding Bonds

The city of Lumberton, North Carolina, will receive sealed bids at the City Hall in Lumberton up to 12 o'clock M. on July 10, 1917, for \$51,000 Lumberton refunding 27-year coupon bonds, 5 per cent. to 5 1/2 per cent. All bids shall be preceded or accompanied by \$1020 cash or certified check on incorporated bank or trust company, payable to Ira B. Townsend, Clerk and Treasurer, Lumberton, N. C. City reserves right to reject all bids. Authority, Public Acts North Carolina, 1917, Chapter 138.

Bids close, June 27, 1917.

## \$50,000 5% Bonds

The Board of Supervisors of Elizabeth City County, Virginia, will receive bids for the sale of \$50,000 of 5 per cent. 25-year County Bonds for improvement of certain roads in said county until 11 o'clock A. M. June 27, 1917. Each bid must be accompanied by certified check for \$2500.

Address H. H. Holt, Clerk, Hampton, Virginia, for further information.

Bids close July 10, 1917.

## Street Improvement

Sealed bids will be received by the Board of Mayor and Aldermen of the Town of Erwin, Tennessee, at the office of the Town Recorder, until 7 P. M., Eastern time, July 10, 1917.

The bids will be on approximately 1400 sq. yds. paving, with the necessary grading, storm sewers, concrete curb and gutter, concrete sidewalk and a limited amount of sanitary house connections, under plans and specifications prepared by the Town Engineer.

A certified check, or the bond of a surety company authorized to do business in Tennessee, for ten per cent. (10%) of the amount of the bid submitted must accompany each bid to indemnify the town in case the successful bidder fails to execute the contract or to furnish the surety bonds for the construction and maintenance.

All work will be done under the supervision of the Town Engineer according to the specifications adopted at the time of the letting. The right is reserved to reject any or all bids.

O. E. BOGART,  
Recorder.  
H. W. MORGAN,  
Town Engineer.



Bids close July 2, 1917.

**Highway**

Sealed proposals, addressed to the County Commissioners of Frederick County, and endorsed "Proposals for building a section of State-aid highway in Frederick county," upon or along the Lewistown-Creagerstown road between Lewistown and Creagerstown, for a distance of about 4.38 miles, will be received by the County Commissioners of Frederick County at their office in Frederick City, Md., until 1 o'clock P. M. on the second day of July, 1917, and at that time and place will be publicly opened and read.

All bids must be made upon blank forms to be obtained of the State Roads Commission at its office, 601 Garrett Building, Baltimore, Md., must give the prices proposed both in writing and in figures, and must be signed by the bidder, with his address.

Each bid is to be accompanied by a certified check for two hundred dollars (\$200), payable to the County Commissioners of Frederick County, said check to be returned to the bidder unless he fails to execute the contract should it be awarded to him.

Plans can be seen and forms of specification and contract may be obtained on cash payment of one dollar (\$1) at the office of the State Roads Commission, Baltimore, Md. The County Commissioners of Frederick County reserve the right to reject any and all proposals.

By order of the County Commissioners.  
F. M. STEVENS, President.

H. L. GAVER, Clerk.

Bids close July 3, 1917.

**Road Improvement**

Sealed proposals, addressed to T. H. Craig, Chairman, will be received at Yazoo City, Mississippi, by the Highway Commissioners of the Separate Road District, composed of Supervisors' District No. 3 of Yazoo County, Mississippi, until 2 o'clock P. M. Tuesday, July 3, for the improvement of certain roads in said District as shown approximately on road map of said District.

Approximate quantities: 30 miles clearing and grubbing, 30 miles subgrade, 300,000 cubic yards grading, 1134 lineal feet of 15-inch pipe, 2010 lineal feet of 18-inch pipe, 1441 lineal feet of 24-inch pipe, 588 lineal feet of 30-inch pipe, 190 cubic yards plain concrete, 280 cubic yards reinforced concrete, 50,000 cubic yards slag, gravel or stone, 212,000 square yards asphalt surface.

Bids invited as per proposals on the following classes of hard surface roads: Asphaltic concrete; brick, slag, gravel or stone with asphalt wearing surface.

Average haul approximately four miles. Plans, profiles and specifications are on file in the office of the Chancery Clerk of Yazoo County at Yazoo City, Mississippi, and also at the office of G. R. Thomas, engineer, Yazoo City, Mississippi.

Each bid must be accompanied by a certified check for \$1000, made payable without qualification to T. H. Craig, Chairman.

The right to reject any and all bids is reserved.  
T. H. CRAIG, Chairman,  
Highway Co. Dist. No. 3.

Bids close June 26, 1917.

**Street Improvements**

Sealed proposals for constructing street improvements in the Town of Tarboro, N. C., will be received by the Mayor and Commissioners until 8.30 o'clock P. M. on the 26th day of June, 1917.

The work will consist of approximately 21,000 square yards of sheet asphalt or other asphaltic pavement on a concrete foundation, together with the necessary curbing, gutters, etc.

Blank forms of proposal and specifications may be obtained from the Engineer. Plans are on file with the Town Manager and certified check for 3 per cent. of the bid is to accompany the proposal. The right is reserved to reject any or all bids.

J. P. KEECH,  
Mayor;  
J. H. JACOBS,  
Clerk and Manager,  
Tarboro, N. C.  
WM. M. PIATT, Engineer,  
Durham, N. C.

Bids close July 7, 1917.

**Street Paving**

Bids will be received by the undersigned until noon of Saturday, July 7, 1917, for the paving of Alabama and Selma Avenues in the City of Selma, Ala., with asphalt, asphaltic concrete, bitulithic or brick, approximately 25,000 square yards. Plans, specifications, etc., are on file at the office of the undersigned at Selma, Ala., from whom full information may be obtained.

W. O. CRISMAN,  
City Engineer.

Bids close July 5, 1917.

**Road Improvement**

Sealed bids for improvement of 19.7 miles of road in District 4, Lincoln County, Miss., will be received at the office of the Chancery Clerk, Brookhaven, Miss., and opened during the afternoon of July 5, 1917. For information address C. F. Sherman, Engineer, McComb, Miss.

Bids close July 10, 1917.

**Railroad Grading**

Bids will be received by the undersigned for the grading of 6 miles of standard-gauge log road in Russell and Buchanan Counties, Virginia, according to plans and specifications, which can be seen at the office of the undersigned at Putnam, Va., or at the office of J. P. Williams, Jr., Engineer, Tazewell, of J. P. Williams, Jr., Engineer, Tazewell, Va.  
WHITE OAK LUMBER CO.

Bids close July 2, 1917.

**Six Miles of Permanent Highway**

Sealed proposals will be received by the County Court and the Advisory Committee at the office of the County Clerk of the County Court of Lincoln County at Hamlin, West Virginia, until 12 o'clock noon July 2, 1917, for the construction of the following roads and bridges:

Bridge across Two-Mile Creek at West Hamlin.

Bridge across Upper Two-Mile Creek, near Sheridan Station.

Road beginning at West Hamlin and running with a survey made by J. M. Oliver, Civil Engineer, and extending to the county-seat at Hamlin, a distance of approximately six miles.

Plans and specifications will be on file in the office of the Clerk of the County Court of Lincoln County, West Virginia.

Bids will be received on the grading and hard surfacing combined, also on grading and hard surfacing separately.

A certified check for the sum of \$500 will be required to be deposited with each bid for bridge at West Hamlin, across Two-Mile Creek, and bridge at Upper Two-Mile Creek; also a certified check for the sum of \$500 with each bid for the whole six miles of said road to be let, and \$100 certified check with each bid for each mile section of said road.

The Court also reserves the right to reject any and all bids or to let any or all work as a whole or any part thereof.

Given under my hand this 28th day of May, 1917.

ALBERT F. BLACK,  
Clerk County Court Lincoln County,  
West Virginia.

Bids close July 18, 1917.

**Highway Work**

McCormick, S. C., June 18, 1917.

Sealed bids for the grading and construction of drainage structures upon approximately seventy miles of highways in McCormick County, S. C., will be received by the McCormick County Commission for Permanent Highways until 2 o'clock P. M. Thursday, July 18, 1917, and at that time publicly opened at the schoolhouse, McCormick, S. C. This work is first improvement contemplated under recent \$175,000 bond issue.

Plans and specifications will be on file at the office of M. E. Worrell, County Highway Engineer, on and after July 5, 1917.

Each proposal must be accompanied by a certified check in the amount of not less than 5 per cent. of total bid, made payable to J. J. Dorn, Chairman.

The Commission reserves the right to reject any and all bids.

(Signed) J. J. DORN,  
Chairman.

Bids close June 27, 1917.

**Permanent Highways**

(Re-advertisement.)

Starkville, Miss.

Sealed bids will be received up until 2 o'clock Wednesday, June the 27th, 1917, at the office of the Clerk of the Board of Supervisors of Oktibbeha County, for the construction of Highways in Districts Nos. Two and Five of Oktibbeha County according to plans and specifications now on file in the office of the said Clerk, approximately \$100,000 available. Each bid to be accompanied by a certified check, made payable to the President of the Board of Supervisors, in amount of \$1000 for each District bid upon as evidence of good faith of bids submitted.

Plans and specifications may be obtained from E. C. Thomas, Engineer, Nash Building, Starkville, Miss.

(Signed) J. R. LONG,  
Clerk of Board of Supervisors.

Bids close June 25, 1917.

**Water-Works and Sewers**

Bids will be received by the Board of Trustees for the Town of Rush Springs, Oklahoma, up to 7 o'clock P. M. Monday, June 25, 1917, on the construction of a system of water-works and sanitary sewers. Plans and specifications are on file at the office of the engineer, the Mackintosh-Walton Co., 1022 State National Bank Bldg., Oklahoma City. Certified check for \$1000 will be required with each bid. The right is reserved to reject any or all bids.

LOUIS LEVERETT,  
President Board of Trustees.

Bids close July 3, 1917.

**Sewer System**

Notice is hereby given that on the 3d day of July, 1917, the Mayor and Board of Aldermen of the Town of Lambert, Mississippi, will receive sealed bids for construction of Sewer System, consisting of two miles of sewer and Septic Tank.

The engineer and the plans and specifications may be seen in the Clerk's office July 2 and 3, 1917.

The Board reserves the right to reject any and all bids.

**Drainage Ditch**

Bids wanted for the construction of 18 miles of ditches to drain about 2000 acres of bottom land in Sweetwater Drainage District in Gwinnett County, Ga.

For full information address  
JOHN R. CAIN,  
Norcross, Gwinnett County, Ga.,  
R. F. D. No. 1.

Bids close July 2, 1917.

**Court House and Jail**

Sealed bids will be received by the County Court of New Madrid, Missouri, until 2 o'clock P. M. July 2, 1917, at the office of the County Clerk in New Madrid, Missouri, for the completion of the Court House and Jail Buildings according to plans and specifications now on file at the office of the County Clerk at New Madrid, Missouri, and at the office of H. G. Clymer, Architect, 629 Wainwright Bldg., St. Louis, Mo.

The Court reserves the right to reject any or all bids.

J. L. RANSBURGH,  
County Clerk.

Bids close July 11, 1917.

**Packing House and Equipment**

Sealed proposals will be received by the Cape Fear Packing Company at its office, 404 Southern Building, Wilmington, N. C., at 12 o'clock noon on Wednesday, July 11, 1917:

- 1st. For a reinforced concrete and brick packing-house.
- 2d. For the insulation.
- 3d. For the elevators.
- 4th. For the boilers.
- 5th. For the engine.
- 6th. For the generator and switchboard.
- 7th. For special packing-house equipment.
- 8th. For refrigerating machinery and piping.
- 9th. For steam fitting, lard and grease lines.

Plans and specifications may be seen at the office of the Cape Fear Packing Company and at the office of the Atlanta Builders' Exchange, Atlanta, Ga., and may be had on application to the architects, Wilson & Sompayrac, Palmetto Building, Columbia, S. C., or the Packers' Architectural & Engineering Company, Manhattan Building, Chicago, Ill. A deposit of \$25 will be required as an evidence of good faith and a guarantee that a bona fide bid will be filed and all documents returned promptly.

The right is reserved to reject any or all bids.

CAPE FEAR PACKING COMPANY.

Bids close June 25, 1917.

**Bridge**

Sealed bids will be received by the County Boards of Catawba and Iredell Counties at a joint session at the office of the County Commissioners at the Court House in Statesville, N. C., until 11 o'clock A. M. June 25, 1917, for building of a bridge over Catawba River at or near the Southern Power Company's Dam, known as the Island Ford Bridge, about 12 miles from Statesville, N. C.

Each bid or proposal must be accompanied by cash or a certified check for \$200, payable to the County Treasurer of Catawba or Iredell County.

All bids must be upon blank forms furnished by the State Highway Commission.

Plans and specifications may be seen at the office of the Register of Deeds of Catawba County, the office of the Register of Deeds of Iredell County, or at the office of the State Highway Commission, Raleigh, N. C.

The Boards reserve the right to accept or reject any proposal.

OSBORNE BROWN,  
Chairman Board County Commissioners  
Catawba County.  
J. E. BOYD,  
Chairman Board County Commissioners  
Iredell County.

Bids close July 11, 1917.

**Heating and Ventilating System**

Proposals will be received by the Board of Regents of the State Hospital for the Insane for heating and ventilating in the female wards North and Talley Buildings. Bids must be filed with C. Fred Williams, Superintendent, on or before 12 o'clock on the 11th day of July, 1917. The contractor to whom the contract is awarded will be required to furnish a surety bond in a sum equal to 50 per cent. of the amount of the contract to guarantee the faithful performance of the same. Each bid must be accompanied by a certified check for \$1000, which will be forfeited to the owner as liquidated damages if the bidder be awarded the contract and he fails to execute the contract and furnish bond as required. Plans and specifications may be obtained by application to George E. Lafaye, Architect, Loan and Exchange Bank Building, Columbia, S. C. The Board reserves the right to accept any or reject all bids.

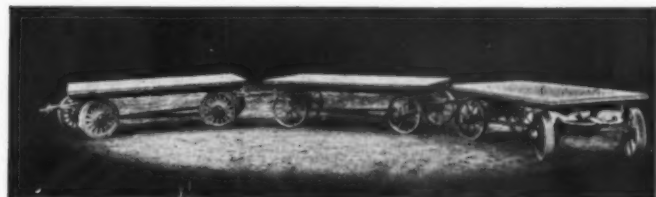
C. FRED WILLIAMS,  
Superintendent.  
J. W. BUNCH,  
Secretary and Treasurer.

**Notice to Architects**

In pursuance of an act passed at the last session of the General Assembly, entitled "An Act to Define the Qualifications for the Practice of Architecture in the State of South Carolina, and to Provide for the Examination and Registration of Architects," approved February 17, 1917, the State Board of Architectural Examiners of South Carolina will convene at the office of the Chairman, 1404 Palmetto Building, in Columbia, S. C., on Monday, July 2, 1917, at 10 o'clock, for the consideration of applications of all architects desiring to practice architecture in this State.

Detailed information may be obtained from the Secretary of the Board.

(Signed) C. C. WILSON,  
Chairman;  
GEORGE E. LAFAYE,  
Secretary,  
Columbia, S. C.



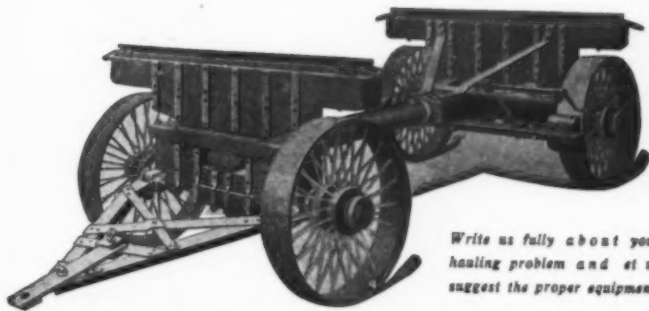
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